

**EXHIBIT 132**  
**FILED UNDER SEAL**

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

WAYMO LLC,

Plaintiff,

vs.

Case

No. 3:17-cv-00939-WHA

UBER TECHNOLOGIES, INC.;  
OTTOMOTTO LLC; OTTO TRUCKING LLC,  
Defendants,

/

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VIDEOTAPED DEPOSITION OF JAMES HASLIM  
THURSDAY, MAY 4, 2017

Reported by:

Anrae Wimberley

CSR No. 7778

Job No. 2610396

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Transcript of video-recorded deposition of  
JAMES HASLIM, taken at Quinn Emanuel Urquhart &  
Sullivan LLP, 50 California Street, 22nd Floor, San  
Francisco, California 94111, beginning at 10:16 a.m.  
and ending at 7:11 p.m. on Thursday, May 4, 2017,  
before Anrae Wimberley, Certified Shorthand Reporter  
No. 7778.

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1 Q. Other than Mr. Feldman, who are you aware of 10:24:20  
2 that most closely works with Mr. Levandowski on a 10:24:27  
3 day-to-day basis? 10:24:29  
4 A. On a day-to-day basis, the only other 10:24:32  
5 employee I'm aware of that works closely with him I 10:24:35  
6 would say is Eric Meyhofer. 10:24:44  
7 Q. Mr. Meyhofer, how do you know him? 10:24:50  
8 A. Eric is my boss. 10:24:52  
9 Q. How long have yourself and Mr. Meyhofer known 10:24:59  
10 each other? 10:25:00  
11 A. I met Eric Meyhofer -- I don't remember when, 10:25:09  
12 but I can tell you it was when he visited Tyto LiDAR 10:25:13  
13 with Scott Boehmke, and they visited to evaluate our 10:25:20  
14 products. 10:25:21  
15 Q. And you said you didn't remember when this 10:25:26  
16 meeting was. 10:25:30  
17 Can you give it a year? 10:25:31  
18 A. It was prior to acquisition by Otto, but a 10:25:40  
19 significant time went by between our meeting and being 10:25:46  
20 acquired by Otto. So I don't even want to hazard the 10:25:52  
21 year, because it could be off. 10:25:55  
22 Q. So there was a meeting between Mr. Meyhofer, 10:26:03  
23 Mr. Boehmke and Tyto LiDAR; is that right? 10:26:08  
24 A. That's right. 10:26:09  
25 Q. And it was sometime before the acquisition of 10:26:12

1 Tyto by Otto; correct? 10:26:15

2 A. Correct. 10:26:15

3 Q. Who else was at that meeting? 10:26:19

4 A. That would have included Brent Schwarz. I'm 10:26:26

5 not certain whether Mike Karasoff would have been at 10:26:30

6 that meeting as well. 10:26:32

7 Q. Anybody else? 10:26:32

8 A. I don't recall. 10:26:33

9 Q. Was Mr. Levandowski at that meeting? 10:26:37

10 A. Not that I recall. 10:26:38

11 Q. You're not sure, though? 10:26:41

12 A. I'm fairly sure that he was not. That would 10:26:45

13 have been awkward. 10:26:48

14 Q. You said, "That would have been awkward." 10:26:50

15 Why do you say that? 10:26:52

16 A. Well, he wasn't an employee of Tyto. 10:26:57

17 Q. Mr. Levandowski. 10:26:57

18 A. That's what I meant. 10:26:59

19 Q. So you're saying it would have been awkward 10:27:02

20 for Mr. Levandowski to be involved in a meeting 10:27:06

21 between Tyto and Uber because he wasn't involved in 10:27:10

22 Tyto; is that right? 10:27:12

23 A. It would be awkward because he was not an 10:27:14

24 employee, yes. 10:27:15

25 Q. So I see you changed words there a little 10:27:17

1 bit -- 10:27:17

2 A. I did. 10:27:19

3 Q. -- and I just want to clarify that. 10:27:20

4 Why did you change -- my question was about 10:27:23

5 whether he was involved, and you answered about 10:27:26

6 whether he was an employee. 10:27:27

7 Why did you do that? 10:27:28

8 A. Because I would need clarification on the 10:27:31

9 word "involved." We would occasionally have dinner, 10:27:38

10 chat, see how the business was going on a friendly 10:27:41

11 term. 10:27:42

12 Q. What is your understanding as to 10:27:43

13 Mr. Levandowski's involvement in Tyto LiDAR? 10:27:48

14 A. My understanding of his involvement with Tyto 10:27:53

15 LiDAR was he was providing us a place of work when we 10:27:58

16 were still Odin Wave, early -- when we were getting 10:28:02

17 started. He sourced contract employees. He was a 10:28:11

18 friend who would stop by occasionally for chats. 10:28:15

19 Q. Chats about what? 10:28:16

20 A. What we're working on, what would the next 10:28:21

21 product be if we finished the current product. 10:28:24

22 Q. Why were you chatting with Mr. Levandowski 10:28:26

23 about what you were working on at Tyto LiDAR? 10:28:29

24 A. I couldn't tell you -- if your question is 10:28:34

25 why that was appropriate or why that was something 10:28:41

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1 that was to discuss, the question came up, he would 10:28:45  
2 ask, we would talk. 10:28:47

3 Q. Was there anyone else that you would have 10:28:50  
4 these kind of chats with, that weren't employees, 10:28:53  
5 about your work at Tyto? 10:28:58

6 A. Not that I recall. 10:29:02

7 Q. Did you ever raise to any of your fellow 10:29:05  
8 employees at Tyto LiDAR, hey, why are we talking with 10:29:10  
9 Mr. Levandowski about the work that we're doing? 10:29:14

10 A. No. 10:29:14

11 Q. Never came up? 10:29:16

12 A. Not to my recollection. 10:29:17

13 Q. You never asked anyone? 10:29:18

14 A. No. 10:29:18

15 Q. You didn't think it was odd that this person 10:29:21  
16 who doesn't work for the company was talking about 10:29:23  
17 your work with you? 10:29:24

18 A. No. 10:29:25

19 Q. Did you know that Mr. Levandowski was working 10:29:27  
20 on LiDAR at Waymo at the time? 10:29:31

21 A. I knew he was working for Google at the time, 10:29:35  
22 and I didn't know the details of what specifically he 10:29:39  
23 was working on. 10:29:41

24 Q. Have you ever spoken with Mr. Levandowski 10:29:44  
25 about [REDACTED]? 10:29:51

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1 A. Yes. 10:29:51

2 Q. When? 10:29:52

3 A. This would be some date, I can't recall when, 10:30:01

4 at Tyto LiDAR. 10:30:05

5 Q. And what did you guys talk about? 10:30:12

6 A. We talked about our need to design our own 10:30:15

7 fiber laser in order to eliminate costs and lead time. 10:30:21

8 And he gave me what I would call a tech tutorial on 10:30:29

9 fiber lasers. 10:30:31

10 Q. What did he say? 10:30:35

11 A. I don't remember the words of our 10:30:37

12 conversation. 10:30:38

13 Q. Tell me everything you remember about that 10:30:40

14 conversation, please. 10:30:41

15 A. He -- trying to recall -- described a 10:30:53

16 schematic, a layout, an approach for [REDACTED] [REDACTED]

17 [REDACTED] generally how they work. Told me 10:31:03

18 to go find a YouTube video from a professor on lasers 10:31:09

19 in general. I believe he recommended some suppliers. 10:31:18

20 Q. Who are the suppliers? 10:31:20

21 A. I believe he recommended [REDACTED] [REDACTED]

22 [REDACTED]. And I believe he recommended [REDACTED] 10:31:41

23 Q. And [REDACTED] that's the same vendor used for 10:31:47

24 the fiber in the Spider design; right? 10:31:51

25 A. Yes. 10:31:51

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1 Q. Sorry I interrupted. 10:31:55

2 Are you finished telling me everything that 10:31:57

3 you remember about that conversation? 10:31:58

4 MR. JAFFE: Can you get me a piece of paper? 10:32:07

5 MR. McCAULEY: (Hands document.) 10:32:15

6 THE WITNESS: I recall he was telling me to hurry 10:32:18

7 up and order the [REDACTED] because they were long 10:32:25

8 lead items. I think he suggested some [REDACTED] [REDACTED]

9 [REDACTED] [REDACTED]

10 [REDACTED] I don't recall any more 10:32:46

11 than that. 10:32:48

12 BY MR. JAFFE: 10:32:48

13 Q. Thank you. 10:32:49

14 So we talked about that conversation, and you 10:32:53

15 said you didn't remember when it was. I just want to 10:32:56

16 see if we can bound that time with any more 10:32:59

17 specificity. 10:33:00

18 A. Ooh. I recall it occurred at our -- after we 10:33:09

19 moved out of Berkeley, so this was in San Leandro. 10:33:16

20 This would have been prior to my starting to develop 10:33:22

21 the fiber lasers, so it had to be relatively 10:33:25

22 shortly -- I would say -- this is all qualitative, I'm 10:33:32

23 sorry -- shortly after that move to San Leandro. 10:33:34

24 Q. All right. So based on those kind of 10:33:36

25 considerations, what approximate timeline did you guys 10:33:42

1 move to San Leandro? 10:33:43

2 A. There's a lot of years between here and 10:33:45

3 there. It's tractable [sic] from other information 10:33:52

4 sources, but I don't have it in my head right now. 10:33:55

5 Q. 2015? 10:33:56

6 A. Could be. I don't know. 10:33:57

7 Q. So sitting here today, you can't give me any 10:34:00

8 more specificity as to the time of that conversation? 10:34:03

9 A. I cannot. 10:34:04

10 Q. I'm going to hand you this. 10:34:06

11 MR. JAFFE: And we're going to mark it as -- now 10:34:09

12 I've lost what exhibit we're at, so I'm just going to 10:34:14

13 say 150 so we don't run over another exhibit.

14 (Plaintiff's Exhibit 150 was marked.)

15 BY MR. JAFFE:

16 Q. Can you please draw the schematic that 10:34:17

17 Mr. Levandowski provided to you during that 10:34:20

18 conversation. And here I'll hand you my pen. 10:34:25

19 A. I can do my best. 10:34:26

20 So I want to state, as I'm going to attempt 10:34:56

21 to do this for you, that there is a very real risk 10:35:00

22 that I'm going to take information that I know now, 10:35:03

23 after having built the fiber laser, and get that 10:35:06

24 somehow accidentally contaminated into a vague 10:35:13

25 recollection of what schematic he gave me. 10:35:16

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1 Q. I just want your best recollection of the 10:35:18  
2 schematic that he gave you. 10:35:19  
3 A. I understand that.  
4 Q. That's all I'm asking for. 10:35:21  
5 A. I understand that. 10:35:23  
6 (Witness draws diagram.) 10:35:31  
7 (Pause in proceedings.)  
8 MR. KIM: Just going to object on form 10:35:39  
9 grounds here, for the record. 10:35:41  
10 THE WITNESS: Okay. I think this is the best 10:38:17  
11 of my recollection. I put a note on here there's [REDACTED] [REDACTED]  
12 [REDACTED]. I don't know what the order was in his 10:38:24  
13 recommendation. 10:38:25  
14 BY MR. JAFFE:  
15 Q. Can I take a look at it? 10:38:31  
16 A. Yes. And I've drawn [REDACTED] And I 10:38:35  
17 don't know if he recommended [REDACTED] And I can 10:38:37  
18 explain any abbreviations. 10:38:39  
19 Q. Sure. 10:38:40  
20 So I'm just going -- just want to talk a 10:38:45  
21 couple things here. 10:38:46  
22 So [REDACTED] what does that stand for? 10:38:49  
23 A. [REDACTED]. 10:38:52  
24 Q. Okay. And then [REDACTED] here on Exhibit 150, 10:38:54  
25 what does that stand for? 10:38:56

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1 A. [REDACTED] 10:39:04

2 Q. And in terms -- I again want to talk about 10:39:07

3 the timing of this briefly. 10:39:09

4 Do you know before -- whether it was before 10:39:12

5 or after 2011? 10:39:14

6 A. I don't know. 10:39:24

7 Q. So did you talk about [REDACTED] [REDACTED]

8 [REDACTED] at this time? 10:39:40

9 A. I don't recall. 10:39:41

10 Q. Did you talk about [REDACTED] 10:39:44

11 at this time? 10:39:45

12 A. Yes. 10:39:46

13 Q. What did you talk about? 10:39:48

14 A. We talked about the need to optimize [REDACTED] [REDACTED]

15 [REDACTED] and that that could be done 10:39:58

16 through an experimental approach. 10:40:01

17 Q. What was the experimental approach that 10:40:03

18 Mr. Levandowski told you about? 10:40:05

19 A. He didn't give a lot of detail. He called it 10:40:09

20 a [REDACTED] I can't remember how he called it. But as 10:40:15

21 he described it, [REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] 10:40:34

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1 Q. Did you and Mr. Levandowski discuss the 10:40:39  
2 [REDACTED] [REDACTED]  
3 [REDACTED] 10:40:49  
4 A. Possibly, yeah. I think there -- he may have 10:40:54  
5 described the relationship between -- almost the 10:40:58  
6 equivalence. [REDACTED] [REDACTED]  
7 [REDACTED] [REDACTED]  
8 [REDACTED] 10:41:07  
9 Q. All right. After you had this conversation 10:41:16  
10 with Mr. Levandowski, did you build the fiber laser 10:41:22  
11 that he described? 10:41:23  
12 A. Yeah. 10:41:23  
13 Q. And when you had this conversation with him, 10:41:27  
14 did you ask him whether he was allowed to reveal this 10:41:29  
15 information to you? 10:41:31  
16 A. No. 10:41:31  
17 Q. Why not? 10:41:35  
18 A. I can't recall what I was feeling or thinking 10:41:37  
19 at the time, but this looks like general information 10:41:41  
20 to me. 10:41:42  
21 Q. So you didn't think, when he provided a 10:41:44  
22 schematic on how to build a fiber laser, that this 10:41:48  
23 could have been confidential information of Google? 10:41:52  
24 A. I wouldn't say so. 10:41:54  
25 Q. That didn't cross your mind? 10:41:56

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1 A. I don't recall what crossed my mind. 10:41:57

2 Q. So you're not denying that it could have 10:42:00

3 happened? 10:42:02

4 A. It didn't happen that I recall -- 10:42:04

5 Q. Did you --

6 A. -- but it's not impossible. 10:42:07

7 Q. Sorry. I didn't mean to interrupt. 10:42:09

8 Did you ever discuss with anyone any question 10:42:11

9 in your mind as to whether Mr. Levandowski was allowed 10:42:14

10 to reveal this information to you? 10:42:17

11 A. No. 10:42:17

12 Q. Didn't cross your mind? 10:42:20

13 A. There's enough prior art. As I began to 10:42:26

14 study this online, it looked pretty plain vanilla to 10:42:32

15 me. 10:42:33

16 Q. All right. So we talk about [REDACTED] [REDACTED]

17 [REDACTED] and you built this fiber laser. 10:42:38

18 Is this the resulting design -- or the basis 10:42:41

19 for the design that is in the fiber laser in Spider? 10:42:45

20 MR. KIM: Objection; form. 10:42:48

21 THE WITNESS: I would be willing to say that this 10:42:53

22 was a starting point for my development of the fiber 10:42:57

23 laser that did end up in the Owl sensor and later the 10:43:03

24 Spider. 10:43:04

25 BY MR. JAFFE: 10:43:04

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1 Q. Right.

2 So, for example, the fiber laser in Spider, 10:43:08

3 [REDACTED]; right? 10:43:10

4 A. Yes. 10:43:10

5 Q. And the [REDACTED] [REDACTED]

6 [REDACTED] right? 10:43:16

7 A. Right. 10:43:16

8 Q. And it's [REDACTED]; 10:43:20

9 right? 10:43:20

10 A. Right. 10:43:20

11 Q. And all those elements are described here in 10:43:23

12 Exhibit 150, the drawing that you described; right? 10:43:26

13 A. Right. 10:43:26

14 Q. And you determined [REDACTED] [REDACTED]

15 [REDACTED] based on 10:43:39

16 Mr. Levandowski's kind of guidance with you on the 10:43:44

17 experimental approach to take; right? 10:43:46

18 MR. KIM: Objection; form. 10:43:48

19 THE WITNESS: I would say that his guidance on a 10:43:57

20 [REDACTED] put me on the right direction to 10:44:01

21 develop [REDACTED] for this, yes. 10:44:05

22 BY MR. JAFFE: 10:44:05

23 Q. So we talked about [REDACTED]. 10:44:08

24 What was the next conversation that you had 10:44:10

25 with Mr. Levandowski about LiDAR? 10:44:18

1 a sensor that was capable of long-range performance 10:50:31  
2 and that they would need a sensor for long-range 10:50:35  
3 viewing on an autonomous vehicle. 10:50:40

4 And so our angle with Uber at the time was we 10:50:44  
5 think we can build such a sensor, but we're not 10:50:47  
6 working on it right now. Our company is open for 10:50:51  
7 acquisition. 10:50:55

8 Q. So the sensor that you were coming up with, 10:51:00  
9 that was going to be a bistatic design; right? 10:51:03

10 A. Yes. 10:51:05

11 Q. At some point, Spider came about and 10:51:12  
12 transformed it to a monostatic design; right? 10:51:15

13 A. True. 10:51:17

14 Q. Do you know who was responsible for the 10:51:19  
15 change from what you were coming up with, which was a 10:51:22  
16 bistatic design, to the monostatic design in Spider? 10:51:26

17 A. I don't recall who among the team was 10:51:34  
18 involved in our conversations first to move away from 10:51:39  
19 supplemental design to one design that would cover all 10:51:44  
20 the way from directly in front of the vehicle out to 10:51:47  
21 long range. But that was a decision that was made 10:51:50  
22 that pretty much negated the proposal I had made of 10:51:56  
23 using a tight-packed purely long-range sensor. 10:52:00

24 Q. So you shifted into the passive voice there. 10:52:05  
25 You're talking about -- who is making these 10:52:07

1 decisions? 10:52:08

2 A. Exactly. I'm trying to recall. I don't 10:52:10

3 know, of all the people that were involved, who was in 10:52:14

4 those conversations. So it would include me. It 10:52:17

5 would include most likely Anthony Levandowski. I 10:52:23

6 believe it would also include Daniel Gruver. And I'm 10:52:28

7 not sure if there's anyone else. 10:52:30

8 Q. And do you know, in the context of those 10:52:35

9 communications, who just said, Hey, James, your design 10:52:44

10 looks great, but we're going to go with the monostatic 10:52:46

11 design and we think it's better? 10:52:50

12 MR. KIM: Objection; form. 10:52:50

13 THE WITNESS: The monostatic design that uses one 10:52:56

14 lens for transmit and receive, I don't know who came 10:52:59

15 up with that. At some point I saw it, seemed okay to 10:53:05

16 me, it seemed compact, let's use it. 10:53:09

17 BY MR. JAFFE: 10:53:09

18 Q. So you don't know -- you have no information 10:53:12

19 of who came up with the monostatic design in Spider? 10:53:15

20 A. True. 10:53:16

21 Q. Okay. So we were still -- going back to our 10:53:25

22 chron of conversations with Mr. Levandowski, when is 10:53:28

23 the next conversation that you had with 10:53:31

24 Mr. Levandowski about LiDAR that you can recall? 10:53:34

25 A. It's very hard for me to recall specific 10:53:43

1 conversations, especially in sequence. At this point, 10:53:47  
2 I report to Anthony Levandowski. 10:53:50  
3 Q. And just for purposes of the record, when 10:53:52  
4 you're talking about "this point," what date are you 10:53:54  
5 talking about? 10:53:55  
6 A. I'm talking about immediately following 10:53:56  
7 Tyto's acquisition by Otto -- or I should say Otto's 10:54:03  
8 acquisition of Tyto. We joined -- at that time, I 10:54:08  
9 reported to Anthony Levandowski. There would be 10:54:12  
10 regular staff meetings. Since my team is working on 10:54:19  
11 LiDAR, LiDAR would definitely come up in conversations 10:54:22  
12 with him, at that point, on a probably fairly routine 10:54:25  
13 basis, like weekly basis. 10:54:28  
14 Q. And what did you and Mr. Levandowski discuss? 10:54:31  
15 A. Progress, approach, schedule or timing, 10:54:39  
16 volumes. 10:54:41  
17 Q. Can you tell me any more specifics about the 10:54:44  
18 routine and regular conversations you were having with 10:54:48  
19 Mr. Levandowski about LiDAR? 10:54:49  
20 A. He would ask about what the design was 10:54:56  
21 looking like, how we were approaching it. Beyond 10:55:00  
22 that, I don't recall specifics of our conversations. 10:55:03  
23 Q. So sitting here today, in this time period 10:55:06  
24 that you're talking about, after you joined Otto in 10:55:10  
25 May of 2016, you would have regular conversations with 10:55:15

1 Mr. Levandowski about LiDAR, but you can't recall any 10:55:18  
2 specifics of those conversations; is that fair? 10:55:21  
3 A. That's fair to say I cannot recall beyond the 10:55:26  
4 details I already told you. 10:55:28  
5 Q. I see. 10:55:29  
6 When is the next -- moving forward in time 10:55:34  
7 here, when is the next substantive conversation with 10:55:38  
8 Mr. Levandowski about LiDAR that you recall? 10:55:40  
9 A. I don't know. 10:55:56  
10 Q. You don't know? 10:55:57  
11 A. I don't know. 10:55:57  
12 Q. I'm not trying to do a memory test here. If 10:56:02  
13 there's just too many conversations for you to recall, 10:56:05  
14 that's fine, and you can just tell me that. But 10:56:08  
15 otherwise I'm just going to keep asking. 10:56:10  
16 MR. KIM: Objection; form. 10:56:10  
17 THE WITNESS: Most of our conversations, that is 10:56:21  
18 between me and Anthony Levandowski, were not 10:56:24  
19 substantive in LiDAR design per se. So I'm having a 10:56:30  
20 hard time remembering further conversations or 10:56:35  
21 specifics. 10:56:35  
22 Most of the time, he wanted to know where 10:56:38  
23 we were in our progress, and he may have asked 10:56:41  
24 what the design was shaping up like. 10:56:44  
25 I do recall one more. 10:56:49

1           He was visiting Uber. He got me on the phone 10:56:56  
2           and was starting to describe using eight fiber 10:57:02  
3           lasers -- that's right -- eight fiber lasers, 10:57:08  
4           splitting their outputs to multiply the number of 10:57:12  
5           channels and then routing a fiber from each fiber 10:57:17  
6           laser into a number of optical cavities. 10:57:24  
7           There was also, at that time frame, a 10:57:26  
8           document published or shared with the team. I think 10:57:31  
9           that came from Scott Boehmke. So this would be 10:57:38  
10          substantive in terms of shaping up what Spider would 10:57:43  
11          eventually become. 10:57:44  
12          BY MR. JAFFE: 10:57:44  
13          Q. And you said Mr. Levandowski called you from 10:57:48  
14          Uber in Pittsburgh; is that right? 10:57:53  
15          A. My understanding he was either at Uber or in 10:57:55  
16          transit to or from Uber in Pittsburgh. 10:57:58  
17          Q. Approximately what time period was this? 10:58:01  
18          A. This would be relatively early in the 10:58:04  
19          development of the Spider. Beyond that, I would defer 10:58:08  
20          to e-mails. I don't remember. 10:58:10  
21          Q. When you say you would "defer to e-mails," 10:58:12  
22          are there e-mails about this conversation? 10:58:15  
23          A. There were e-mails -- I should say there was 10:58:19  
24          an e-mail with a document that was published that 10:58:24  
25          contained the substance of what he was describing. 10:58:27

1 Q. What was the name of that document? 10:58:29

2 A. I think it had the name like LiDAR Thoughts. 10:58:36

3 Q. And that was authored by Mr. Levandowski? 10:58:39

4 MR. KIM: Objection; form. 10:58:39

5 THE WITNESS: I don't know that Anthony authored 10:58:43

6 that or if Scott authored that. 10:58:46

7 BY MR. JAFFE: 10:58:46

8 Q. Mr. Levandowski had design input into what -- 10:58:49

9 the LiDAR described in that document, though; is that 10:58:53

10 fair? 10:58:54

11 MR. KIM: Objection; form. 10:58:54

12 THE WITNESS: That's a good question. He 10:58:58

13 described it to me, but I don't know whether he was 10:59:02

14 describing his idea or Scott's idea. I don't know. 10:59:06

15 BY MR. JAFFE: 10:59:06

16 Q. So just to back up, Mr. Levandowski called 10:59:14

17 you and provided some thoughts on how to do the fiber 10:59:20

18 laser design in Spider. And he was describing 10:59:23

19 something that was in a document called LiDAR 10:59:25

20 Thoughts; is that fair? 10:59:27

21 A. He was describing something that was later 10:59:30

22 published in an e-mail with LiDAR Thoughts. 10:59:34

23 Q. And at this time, Otto was an independent 10:59:41

24 company; right? 10:59:43

25 A. Yes. 10:59:43

1 Q. Why was Mr. Levandowski at Uber? 10:59:46

2 A. As I understood it, we were considering 10:59:52

3 selling our LiDAR sensors to Uber. 10:59:56

4 Q. When you say "As I understood it," what was 10:59:59

5 the basis for that understanding? 11:00:01

6 MR. KIM: Just caution you not to reveal 11:00:04

7 privileged communications with lawyers. If you can 11:00:07

8 answer it without doing that, you can do so. 11:00:10

9 THE WITNESS: Um-hum. 11:00:11

10 I don't recall the exact timing and 11:00:15

11 sequencing. At some point, engineers from Uber 11:00:23

12 Pittsburgh visited our office. And I have a vague 11:00:33

13 recollection Anthony telling us to be helpful, to 11:00:41

14 share information freely. It seemed almost like a 11:00:48

15 partnership. Around the time, Anthony put an 11:00:56

16 e-mail to the entire company saying we were going 11:00:59

17 to be working with them, providing sensor to them, 11:01:03

18 possibly involving autonomous software as well. 11:01:09

19 MR. JAFFE: Counsel, I don't think that e-mail has 11:01:12

20 been produced, and we ask that it be produced 11:01:14

21 immediately. 11:01:16

22 MR. KIM: I don't know which e-mail that 11:01:17

23 specifically refers to. I believe we produced a bunch 11:01:21

24 of e-mails that are similar to that description, but 11:01:24

25 we can confirm. 11:01:26

1           A.    This would be distinct from status and           11:05:08  
2   updates.   11:05:09  
3           Q.    Okay. I just want that to be clear.           11:05:10  
4                    Okay. When you joined Tyto, when did you       11:05:14  
5   first hear that Mr. Levandowski would be your boss on       11:05:19  
6   the LiDAR team?   11:05:21  
7           A.    I believe my offer letter for joining Otto       11:05:28  
8   would have indicated that he would be my manager, I       11:05:33  
9   believe.   11:05:33  
10          Q.    So Mr. Levandowski decided that you           11:05:41  
11   were -- that he was -- you were going -- excuse me --   11:05:44  
12   that he was going to be your boss on the LiDAR team       11:05:47  
13   when you joined Otto; right?                               11:05:48  
14          A.    I presumed that, yes.                       11:05:51  
15          Q.    Do you think the LiDAR team needed           11:05:56  
16   Mr. Levandowski to accomplish its goals?               11:06:01  
17          MR. KIM: Objection; form.                       11:06:01  
18          THE WITNESS: Honestly, no.                       11:06:08  
19   BY MR. JAFFE:   11:06:08  
20          Q.    Why not?                                       11:06:09  
21          A.    We have a team that probably could have come   11:06:13  
22   up with a number of different LiDAR sensors without       11:06:17  
23   his input.   11:06:18  
24          Q.    But that's not what happened; right?       11:06:20  
25          A.    That's not what happened.                   11:06:22

1 Q. So when was the first time you worked with 11:06:32  
2 Max Levandowski on LiDAR? 11:06:35  
3 A. That would be immediately following my 11:06:38  
4 joining Otto. 11:06:39  
5 Q. And what is your working relationship with 11:06:43  
6 Max Levandowski? 11:06:45  
7 A. He reports to me. 11:06:47  
8 Q. He reports to you. I see. 11:06:49  
9 So, actually, let's go back in time to when 11:06:56  
10 you first joined Otto. 11:06:58  
11 And you're having regular interactions with 11:07:00  
12 Mr. Levandowski; right? 11:07:02  
13 A. Um-hum. 11:07:03  
14 Q. What devices are you aware of him using at 11:07:06  
15 that time in terms of computers? 11:07:09  
16 A. I believe he had a laptop, probably a 11:07:12  
17 Macintosh. 11:07:14  
18 Q. Is that his personal laptop? 11:07:17  
19 MR. KIM: Objection; form. 11:07:17  
20 THE WITNESS: I don't know. 11:07:19  
21 BY MR. JAFFE: 11:07:19  
22 Q. What about a phone? Was he using a phone? 11:07:22  
23 A. Sure. I don't know if he had one phone, 11:07:24  
24 multiple phones. I didn't really pay attention, but 11:07:27  
25 I'm sure he had a phone. 11:07:28

1 Q. How often did Mr. Levandowski bring his 11:07:32  
2 personal laptop to work with him? 11:07:35  
3 MR. KIM: Objection; form. 11:07:35  
4 THE WITNESS: I couldn't possibly know. 11:07:37  
5 BY MR. JAFFE: 11:07:37  
6 Q. Every day? 11:07:39  
7 MR. KIM: Objection; form. 11:07:39  
8 THE WITNESS: The reason I couldn't possibly know 11:07:42  
9 is I don't know whether the laptop he may have carried 11:07:45  
10 was his personal laptop or the work laptop. 11:07:48  
11 BY MR. JAFFE: 11:07:48  
12 Q. I see. All right. So let's just talk about 11:07:51  
13 the one laptop that you know about. 11:07:53  
14 How often did he bring that laptop to work 11:07:55  
15 with him? 11:07:56  
16 MR. KIM: Objection; form. 11:07:56  
17 THE WITNESS: I don't know. I have no idea. 11:08:02  
18 BY MR. JAFFE: 11:08:02  
19 Q. You saw him at work with the personal laptop; 11:08:06  
20 right? 11:08:06  
21 A. I'm sure I've seen him at work with a laptop. 11:08:10  
22 Q. And that was a regular occurrence; right? 11:08:12  
23 MR. KIM: Objection; form. 11:08:14  
24 THE WITNESS: I hardly paid attention to how often 11:08:18  
25 he was carrying a laptop. 11:08:20

1 BY MR. JAFFE: 11:08:20

2 Q. I understand you're saying that you hardly 11:08:23

3 pay attention to this. The judge specifically asked 11:08:25

4 to find out this information, and that's the reason 11:08:27

5 I'm asking this question. I just want that to be 11:08:30

6 clear. 11:08:31

7 How often -- so let me just pause there, 11:08:34

8 okay, and I'm going to ask my question again. 11:08:36

9 How often did you see Anthony Levandowski 11:08:38

10 with his Macintosh laptop at Otto? 11:08:42

11 MR. KIM: Objection; form. 11:08:42

12 THE WITNESS: I don't recall how often. 11:08:48

13 BY MR. JAFFE: 11:08:48

14 Q. Every day? 11:08:53

15 MR. KIM: Objection; form. 11:08:53

16 THE WITNESS: Not necessarily. 11:08:55

17 BY MR. JAFFE: 11:08:55

18 Q. Four, five days a week; is that fair? 11:08:58

19 A. I don't know. 11:09:03

20 Q. You're not willing to tell me any sort of 11:09:06

21 numbers? 11:09:07

22 MR. KIM: Objection; form. 11:09:07

23 THE WITNESS: I can't give you any number for how 11:09:12

24 often I can recall seeing him carrying a laptop. And 11:09:16

25 I would also mention he spent a lot of time traveling 11:09:20

1 to the Pittsburgh office, and I would have no idea how 11:09:23  
2 often he carried a laptop for that as well. 11:09:26  
3 BY MR. JAFFE: 11:09:26  
4 Q. Fair. 11:09:27  
5 I'm not trying to ask you -- I'm only asking 11:09:28  
6 for your understanding based on your interactions with 11:09:31  
7 him. 11:09:32  
8 Understand? 11:09:32  
9 A. Understand. 11:09:33  
10 Q. Would you agree that you probably saw 11:09:36  
11 Mr. Levandowski with his laptop three days a week, 11:09:41  
12 approximately? 11:09:42  
13 MR. KIM: Objection to form. Same objection. 11:09:49  
14 THE WITNESS: I really don't recall. I really do 11:09:51  
15 not recall. 11:09:52  
16 BY MR. JAFFE: 11:09:52  
17 Q. All right. Let me come at this the other 11:09:55  
18 way. 11:09:56  
19 You saw him at least once with the laptop; 11:09:58  
20 right?  
21 A. Sure. 11:09:59  
22 Q. At least, let's say, 50 times? 11:10:01  
23 MR. KIM: Objection to form. 11:10:02  
24 THE WITNESS: At least some number of times. I 11:10:06  
25 don't know. 11:10:06

1 BY MR. JAFFE:

2 Q. Okay. You're aggressively resisting giving 11:10:09  
3 any sort of number. And the judge asked for this, so 11:10:12  
4 I'm just going to press on this a little bit longer? 11:10:13  
5 Okay?

6 MR. KIM: Objection to form. 11:10:17

7 BY MR. JAFFE: 11:10:17

8 Q. More than 30 times? 11:10:20

9 A. Possibly. 11:10:21

10 Q. Would you dispute if someone said to the 11:10:22  
11 court that he -- you saw his laptop at least 30 times 11:10:27  
12 when you were working at Otto before the Uber  
13 acquisition?

14 MR. KIM: Objection to form. 11:10:30

15 THE WITNESS: If someone claimed to see him with a 11:10:32  
16 laptop 30 times, I would not object to that. 11:10:34

17 BY MR. JAFFE: 11:10:34

18 Q. And just talking about regularly, if we were 11:10:38  
19 going to put an approximate amount, would you say 11:10:41  
20 approximately two to four times a week you saw him 11:10:44  
21 with a laptop at Otto? Is that fair? 11:10:46

22 MR. KIM: Objection; form. 11:10:46

23 THE WITNESS: I don't know if kept his laptop with 11:10:50  
24 him everywhere he went in the office, so -- 11:10:53

25 BY MR. JAFFE:

1 Q. I'm just asking about what you saw with your 11:10:56  
2 own eyes. 11:10:57

3 A. So I would say a few times a week when he was 11:11:04  
4 spending that week in the office. 11:11:07

5 Q. Fair. 11:11:08

6 So just to clean that up for purposes of the 11:11:12  
7 record, your testimony, based on your personal 11:11:17  
8 knowledge, is you approximately saw Mr. Levandowski 11:11:21  
9 when he was in San Francisco with his Macintosh laptop 11:11:27  
10 a few times a week -- 11:11:29

11 MR. KIM: Objection; form. 11:11:31

12 BY MR. JAFFE: 11:11:31

13 Q. -- is that fair? 11:11:33

14 MR. KIM: Objection; form. 11:11:34

15 THE WITNESS: It's fair as long as we emphasize 11:11:37  
16 approximately. 11:11:39

17 BY MR. JAFFE: 11:11:39

18 Q. Okay. All right. Did you ever get e-mails 11:11:45  
19 from Mr. Levandowski while he was working from home? 11:11:51

20 A. I don't know. 11:11:54

21 Q. Why don't you know? 11:11:57

22 A. I would occasionally get e-mails from Anthony 11:12:00  
23 Levandowski, but I don't know how to tell you where he 11:12:03  
24 was when he sent those e-mails. 11:12:05

25 Q. So there's no instance where you're sitting 11:12:09

1 in the office and you look around and he's not there 11:12:11  
2 and he hasn't been there all day and he's sending 11:12:16  
3 e-mails? That's never happened? 11:12:19  
4 A. Incorrect. 11:12:19  
5 Q. So can you please explain then. 11:12:21  
6 A. He travels a lot. So I quite likely got 11:12:25  
7 e-mails from him when I didn't see him in the office. 11:12:30  
8 Q. So you don't know where he is a lot of the 11:12:32  
9 time; is that fair? 11:12:33  
10 A. That's fair. 11:12:34  
11 Q. So you got e-mails from Mr. Levandowski when 11:12:37  
12 you were working at Otto, but he wasn't sitting with 11:12:39  
13 you in the office; right? 11:12:40  
14 A. I believe that's true, yes. 11:12:45  
15 Q. So he wasn't in the office, you don't know 11:12:47  
16 where he is, but he's e-mailing you about Otto; is 11:12:50  
17 that fair? 11:12:52  
18 A. That's fair. 11:12:53  
19 Q. And was that something that happened on a 11:12:58  
20 regular basis? 11:12:59  
21 MR. KIM: Objection; form. 11:12:59  
22 THE WITNESS: I think that's fair. 11:13:04  
23 BY MR. JAFFE: 11:13:04  
24 Q. So I want to talk about Fuji for a second 11:13:11  
25 here. 11:13:13

1 In the Fuji design -- and we'll just go 11:13:17  
2 cavity by cavity. 11:13:18  
3 But for the mid-range cavity, there are three 11:13:20  
4 transmit boards; right? 11:13:21  
5 A. Right. 11:13:23  
6 Q. And in the mid-range cavity, there are three 11:13:27  
7 transmit boards and they are pointed -- and they're 11:13:30  
8 parallel to one another; right? 11:13:31  
9 A. Right. 11:13:31  
10 Q. The transmit lens for the mid-range cavity is 11:13:37  
11 less in width than the width of the transmit boards; 11:13:43  
12 right? 11:13:44  
13 MR. KIM: Objection; form. 11:13:44  
14 THE WITNESS: Could you clarify. I'm confused 11:13:50  
15 which lens you're referring to. 11:13:52  
16 BY MR. JAFFE: 11:13:52  
17 Q. Yes. Let me just mark something and make 11:13:56  
18 this easier. 11:13:57  
19 MR. JAFFE: And we'll have this be 151. 11:14:04  
20 (Plaintiff's Exhibit 151 was marked.)  
21 MR. KIM: At some point -- we've been going for I 11:14:10  
22 think over an hour -- if we can take a break. You can 11:14:12  
23 ask your line of questions. I'm just saying at a 11:14:15  
24 convenient time. 11:14:16  
25 MR. JAFFE: Sure. 11:14:16

1 [REDACTED] 11:16:25

2 BY MR. JAFFE: 11:16:25

3 Q. What do you mean, "necessarily"? 11:16:26

4 A. Any time you have a lens placed in 11:16:32

5 relationship to the source of light, the lateral 11:16:38

6 resolution -- wrong word -- the lateral relationship 11:16:42

7 between a light source and a lens will dictate the 11:16:47

8 exit angle of the light coming out of that lens. 11:16:50

9 So if you want the light to go straight, you 11:16:54

10 have to carefully place the FAC lens, or fast-axis 11:16:59

11 collimation lens, in a position that will cause the 11:17:04

12 light to exit perhaps parallel to the board, if you 11:17:07

13 want that. 11:17:08

14 Q. So in the Fuji design -- and we'll call it 11:17:11

15 the FAC lens for the benefit of the court reporter 11:17:13

16 here -- [REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]; is that fair? 11:17:26

19 MR. KIM: Objection; form. 11:17:26

20 THE WITNESS: Maybe I don't like the word [REDACTED] [REDACTED]

[REDACTED] And 11:17:38

22 so to clarify, the FAC lens precollimates the light 11:17:44

23 [REDACTED]. 11:17:47

24 BY MR. JAFFE: 11:17:47

25 Q. [REDACTED] 11:17:49

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 [REDACTED]; right? 11:17:50

2 MR. KIM: Objection; form. 11:17:50

3 BY MR. JAFFE: 11:17:50

4 Q. That's all I mean by [REDACTED] 11:17:54

5 MR. KIM: Objection; form. 11:17:54

6 THE WITNESS: On two of our laser boards, the 11:17:59

7 [REDACTED] [REDACTED]

8 [REDACTED] [REDACTED]

9 [REDACTED] 11:18:11

10 BY MR. JAFFE: 11:18:11

11 Q. Okay. So I don't have real-time, so I'm 11:18:18

12 going to try and just repeat back to make sure I 11:18:21

13 understand what you said. 11:18:22

14 The fast-axis collimation -- [REDACTED] [REDACTED]

15 [REDACTED] [REDACTED]

16 [REDACTED] [REDACTED]

17 [REDACTED]; true? 11:18:42

18 MR. KIM: Objection; form. 11:18:42

19 THE WITNESS: True as long as we clarify 11:18:48

20 horizontal is horizontal in the drawing. 11:18:51

21 BY MR. JAFFE: 11:18:51

22 Q. So if anyone testified or said that there's 11:18:57

23 [REDACTED], that would 11:19:01

24 be wrong; right? 11:19:02

25 MR. KIM: Objection; form. 11:19:02

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 THE WITNESS: Not necessarily. The word 11:19:05  
2 [REDACTED] in LiDAR often means [REDACTED] [REDACTED]  
3 [REDACTED] 11:19:13  
4 BY MR. JAFFE: 11:19:13  
5 Q. I see. 11:19:13  
6 So it's just kind of -- if they said there's 11:19:18  
7 [REDACTED], they could be right, but they could be 11:19:21  
8 wrong? 11:19:21  
9 MR. KIM: Objection; form. 11:19:21  
10 THE WITNESS: Could. 11:19:23  
11 BY MR. JAFFE: 11:19:23  
12 Q. And if someone said [REDACTED] [REDACTED]  
13 [REDACTED] [REDACTED]  
14 [REDACTED]: right? 11:19:32  
15 MR. KIM: Objection; form. 11:19:32  
16 THE WITNESS: Too many words at once. Could you 11:19:36  
17 repeat your last question. 11:19:38  
18 MR. JAFFE: Why don't we just have the court 11:19:47  
19 reporter repeat it.  
20 (Record read by reporter as follows:  
21 "Question: And if someone said it's  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED] right?") 11:19:47  
25 MR. KIM: Objection; form. 11:19:47

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 THE WITNESS: If they say it's [REDACTED] yes, they 11:19:52  
2 are not necessarily denying the fact that [REDACTED] [REDACTED]  
3 [REDACTED] 11:19:57  
4 BY MR. JAFFE: 11:19:57  
5 Q. Sorry. There was a missing word there. 11:19:59  
6 If they say it's not [REDACTED] -- 11:20:01  
7 A. Oh.  
8 Q. -- they're not denying that it [REDACTED] [REDACTED]  
9 [REDACTED]; 11:20:08  
10 true? 11:20:08  
11 MR. KIM: Objection; form. 11:20:08  
12 THE WITNESS: If I were to say it's not [REDACTED] 11:20:18  
13 I would not be denying that [REDACTED] I 11:20:21  
14 can't tell you what they would say. 11:20:22  
15 MR. JAFFE: Okay. Why don't we take our first 11:20:27  
16 break. 11:20:28  
17 THE VIDEOGRAPHER: We are off the record at 11:20 11:20:31  
18 a.m. 11:20:31  
19 (Recess taken.) 11:20:31  
20 THE VIDEOGRAPHER: We're back on the record at 11:33:47  
21 11:33 a.m. 11:33:49  
22 BY MR. JAFFE: 11:33:49  
23 Q. Welcome back. 11:34:13  
24 A. Thank you. 11:34:14  
25 Q. Last Thursday it was reported in the press 11:34:19

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 that Mr. Levandowski was demoting himself in some way. 11:34:26

2 Are you familiar with that? 11:34:27

3 A. I'm familiar with the announcement that his 11:34:31

4 position was changing. I only take issue with your 11:34:37

5 comment -- or your phrase that says he was demoting 11:34:40

6 himself. I don't know who decided his position should 11:34:45

7 change. 11:34:45

8 Q. I see. 11:34:45

9 So you don't know who actually decided that 11:34:49

10 his position should change? 11:34:51

11 A. Correct. 11:34:51

12 Q. And do you take issue with the idea that he 11:34:54

13 was demoted in some way? 11:34:56

14 A. Not necessarily. 11:34:58

15 Q. Okay. So if I call it his demotion, that's a 11:35:03

16 fair statement? 11:35:03

17 A. I won't argue with that. 11:35:05

18 Q. So how did you find out about 11:35:09

19 Mr. Levandowski's demotion? 11:35:12

20 A. I received an e-mail. I believe the whole 11:35:16

21 company received an e-mail describing that change. 11:35:21

22 I want to say Anthony sent the e-mail, but 11:35:25

23 I'm not 100 percent positive on that. 11:35:28

24 [REDACTED] 11:35:36

25 [REDACTED]

1 [REDACTED] [REDACTED]  
2 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
3 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
4 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
5 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
6 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
7 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
8 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
9 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
10 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
11 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
12 [REDACTED] [REDACTED] [REDACTED] [REDACTED]  
13 BY MR. JAFFE: 11:36:13  
14 Q. Before that e-mail on Thursday, there was no 11:36:18  
15 sort of company policy excluding Mr. Levandowski from 11:36:23  
16 providing input onto LiDAR; right? 11:36:27  
17 MR. KIM: Objection; form. 11:36:27  
18 THE WITNESS: I'm not aware of any policy before 11:36:31  
19 that date regarding excluding him from any aspect of 11:36:35  
20 any work at the company. 11:36:36  
21 BY MR. JAFFE: 11:36:36  
22 Q. Including LiDAR? 11:36:41  
23 A. Including LiDAR. 11:36:41  
24 Q. So you never received any sort of special 11:36:45  
25 instructions about what you could and couldn't do 11:36:47

1 working with Mr. Levandowski before last Thursday; is 11:36:52  
2 that fair? 11:36:53  
3 A. That seems -- yeah, that's a true statement. 11:36:58  
4 Q. Are you aware of anyone else receiving 11:37:00  
5 special instructions about what they could and 11:37:02  
6 couldn't do in working with Mr. Levandowski before 11:37:05  
7 last Thursday? 11:37:06  
8 MR. KIM: Objection; form. 11:37:06  
9 THE WITNESS: I'm not aware of anything like that. 11:37:10  
10 BY MR. JAFFE: 11:37:10  
11 Q. So before last Thursday Mr. -- as far as you 11:37:14  
12 know, Mr. Levandowski was free to provide input into 11:37:18  
13 all parts of the self-driving project, including LiDAR 11:37:20  
14 and other parts; right? 11:37:24  
15 MR. KIM: Objection; form. 11:37:24  
16 THE WITNESS: That's my understanding. 11:37:26  
17 BY MR. JAFFE: 11:37:26  
18 Q. And today as of right now, he's free to 11:37:32  
19 provide input into all parts of the self-driving 11:37:36  
20 project except for LiDAR? 11:37:38  
21 MR. KIM: Objection; form. 11:37:38  
22 THE WITNESS: I don't recall if there was any 11:37:45  
23 other restrictions, but definitely LiDAR was mentioned 11:37:48  
24 specifically. 11:37:52  
25 BY MR. JAFFE: 11:37:52

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Q. You don't recall whether there were any other 11:37:54  
2 restrictions in the e-mail? 11:37:56  
3 A. In the e-mail, correct. 11:37:57  
4 Q. I see. Okay. So let me try this again. 11:38:00  
5 So apart from the restrictions that are 11:38:02  
6 stated in the e-mail, you're not -- today you're not 11:38:04  
7 aware of any other limitations on Mr. Levandowski's 11:38:08  
8 input into the self-driving project? 11:38:11  
9 A. Correct, I'm not aware of any such additional 11:38:13  
10 limitations. 11:38:14  
11 Q. [REDACTED] [REDACTED]  
12 [REDACTED] 11:38:20  
13 MR. KIM: Objection; form. 11:38:22  
14 THE WITNESS: [REDACTED]. 11:38:23  
15 BY MR. JAFFE: 11:38:23  
16 Q. [REDACTED] [REDACTED]  
17 [REDACTED] [REDACTED]  
18 [REDACTED] [REDACTED]  
19 MR. KIM: Objection; form. 11:38:36  
20 THE WITNESS: [REDACTED] 11:38:38  
21 BY MR. JAFFE: 11:38:38  
22 Q. [REDACTED] [REDACTED]  
23 [REDACTED] [REDACTED]  
24 [REDACTED] [REDACTED]  
25 [REDACTED] [REDACTED] 11:38:47

1 MR. KIM: Objection; form. 11:38:48

2 BY MR. JAFFE: 11:38:48

3 Q. [REDACTED] [REDACTED]

4 [REDACTED] 11:38:54

5 MR. KIM: Objection; form. 11:38:55

6 THE WITNESS: [REDACTED] [REDACTED]

7 [REDACTED] [REDACTED]

8 [REDACTED] [REDACTED]

9 BY MR. JAFFE:

10 Q. [REDACTED] [REDACTED]

11 [REDACTED] [REDACTED]

12 [REDACTED] [REDACTED]

13 [REDACTED] [REDACTED]

14 [REDACTED] [REDACTED]

15 [REDACTED] [REDACTED]

16 [REDACTED] [REDACTED]

17 [REDACTED]

18 [REDACTED] [REDACTED] 11:39:22

19 Just for the purposes of the record, can you 11:39:23

20 just explain what you mean by that for a lay audience. 11:39:26

21 A. So again, my understanding of how our 11:39:29

22 autonomous software works, is limited -- with that 11:39:34

23 preface, I would suggest my understanding of the 11:39:37

24 perception team is to take LiDAR and other sources of 11:39:42

25 data and determine what objects exist outside the 11:39:50

1 vehicle. 11:39:52

2 If you refer generically to a compute team, 11:39:58

3 there may be other aspects of software after or 11:40:01

4 downstream in the data path after perception that 11:40:05

5 would need to use data that the perception software 11:40:09

6 generates in order to determine the car's proper 11:40:15

7 driving course. 11:40:17

8 Q. So even today -- well, actually, let me back 11:40:22

9 up. 11:40:22

10 What is "perception" in this context? 11:40:25

11 A. In this context, my use of the word 11:40:29

12 "perception" would be software that takes sensed 11:40:36

13 data input from LiDAR, camera, radar, possibly 11:40:42

14 inertial measurement sensors, wheel sensors, to 11:40:49

15 identify distinct objects in the world around it and 11:40:54

16 possibly classify those objects in terms of perhaps, 11:41:00

17 for example, being a person, a pedestrian, another car 11:41:06

18 or a bus and passing that information to the next 11:41:12

19 layers of software that could exist. 11:41:15

20 Q. And in the context of our conversation, what 11:41:18

21 does the compute team do? 11:41:20

22 A. So this would be a vague term. I can only 11:41:24

23 guess what you might be hinting at, but I know that 11:41:27

24 there are other software and software groups writing 11:41:32

25 software that operate on an autonomous vehicle. 11:41:37

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Q. What is a software that decides when to turn 11:41:39  
2 and when to stop? What is that called within Uber? 11:41:43  
3 A. If I'm not mistaken, I believe that is called 11:41:45  
4 planning. 11:41:46  
5 Q. [REDACTED] [REDACTED]  
6 [REDACTED] 11:41:51  
7 MR. KIM: Objection; form. 11:41:53  
8 THE WITNESS: [REDACTED] [REDACTED]  
9 [REDACTED] [REDACTED]  
10 [REDACTED] 11:42:04  
11 BY MR. JAFFE: 11:42:04  
12 Q. And you understand that the planning software 11:42:06  
13 leverages LiDAR data; right? 11:42:09  
14 MR. KIM: Objection; form. 11:42:13  
15 THE WITNESS: I want to be specific and say I 11:42:16  
16 don't know whether the planning software leverages 11:42:19  
17 native LiDAR data or data that's output from the 11:42:24  
18 perception software. I just don't know. 11:42:28  
19 BY MR. JAFFE: 11:42:28  
20 Q. Let's be clear, though. 11:42:29  
21 The planning software leverages data that 11:42:32  
22 came from the LiDAR? 11:42:34  
23 A. Yes. 11:42:34  
24 Q. You don't dispute that; right? 11:42:36  
25 A. No. 11:42:36

1 Q. Okay. 11:42:39

2 MR. JAFFE: Let's mark -- this will be 152. 11:43:26

3 THE REPORTER: Correct. 11:43:26

4 It's the supplemental declaration, 152?

5 MR. JAFFE: Correct.

6 THE REPORTER: I think you need this one.

7 (Plaintiff's Exhibit 152 was marked.) 11:43:29

8 BY MR. JAFFE: 11:43:29

9 Q. Did I give you two copies? 11:43:55

10 A. Yeah.

11 Q. Mr. Haslim, whose idea was it for you to 11:44:05

12 write this supplemental declaration? 11:44:08

13 MR. KIM: Objection to the extent it calls for 11:44:12

14 privileged information. 11:44:14

15 Instruct you not to answer or 11:44:18

16 reveal -- answer to the extent it reveals any 11:44:23

17 privileged communications with any attorneys. 11:44:27

18 THE WITNESS: So I would say the legal team 11:44:33

19 working for Uber instructed this. 11:44:37

20 BY MR. JAFFE:

21 Q. And I don't want to get into properly 11:44:40

22 privileged conversations. All I want to ask is, in 11:44:46

23 terms of this document, 152, your declaration, was it 11:44:49

24 something where you said, I want to put in a new 11:44:52

25 declaration or someone approached you and said, we 11:44:54

1 want a new declaration? 11:44:56

2 MR. KIM: And, again, you can answer whether or 11:44:59

3 not it was done at the direction of counsel, but don't 11:45:03

4 reveal any privileged communications with counsel. 11:45:07

5 THE WITNESS: Okay. So this was generated at the 11:45:11

6 instruction of counsel. 11:45:12

7 BY MR. JAFFE: 11:45:12

8 Q. Okay. So we're clear, the lawyers -- and I 11:45:17

9 don't want to get into the substance of any 11:45:18

10 communications here, but just for the purposes of the 11:45:21

11 record, your supplemental declaration was put together 11:45:26

12 at the request of Uber's lawyers; fair? 11:45:30

13 A. Yes. 11:45:30

14 Q. Since our last deposition, have you discussed 11:45:39

15 any content of your declarations or the deposition 11:45:42

16 with any nonlawyers? 11:45:50

17 A. I don't recall any substantive discussion 11:45:53

18 with nonlawyers. 11:45:55

19 Q. Have you spoken with Mr. Levandowski about 11:45:58

20 the subject matter of this case? 11:46:01

21 A. Not in any substantive way. 11:46:06

22 Q. At all? 11:46:07

23 A. It's probably -- yes. 11:46:11

24 Q. What did you and Mr. Levandowski discuss? 11:46:14

25 MR. KIM: And I want to caution you -- if you had 11:46:17

1 any of these discussions in the presence of lawyers, 11:46:20  
2 would caution you not to reveal any privileged 11:46:22  
3 communications. 11:46:25

4 THE WITNESS: This jovial, high-level, 11:46:30  
5 nonsubstantive discussion -- "discussion" is almost a 11:46:35  
6 strong term. How about, how are you doing, how are 11:46:39  
7 you feeling? 11:46:40

8 BY MR. JAFFE: 11:46:40

9 Q. Please tell me everything that you remember 11:46:44  
10 about the conversations that you had with 11:46:46  
11 Mr. Levandowski about the subject matter of this case? 11:46:50

12 A. [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED] 11:47:15

18 MR. KIM: Objection; form. 11:47:17

19 THE WITNESS: [REDACTED] 11:47:17

20 BY MR. JAFFE: 11:47:17

21 Q. [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]

25 Q. Sorry. Continue. 11:47:30

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 A. [REDACTED] [REDACTED]  
2 [REDACTED] [REDACTED]  
3 [REDACTED] [REDACTED] [REDACTED]  
4 [REDACTED] [REDACTED]  
5 Q. Anything else? 11:47:46  
6 A. [REDACTED] [REDACTED]  
7 [REDACTED] [REDACTED]  
8 [REDACTED] 11:48:04  
9 [REDACTED] [REDACTED] [REDACTED]  
10 [REDACTED] [REDACTED] [REDACTED]  
11 [REDACTED] [REDACTED]  
12 [REDACTED] [REDACTED] 11:48:13  
13 Q. Anything else? 11:48:15  
14 A. No. 11:48:15  
15 Q. [REDACTED] [REDACTED] 11:48:20  
16 [REDACTED] 11:48:22  
17 [REDACTED] 11:48:23  
18 [REDACTED] [REDACTED] 11:48:25  
19 Q. Why not? 11:48:26  
20 A. I don't know. 11:48:29  
21 Q. You don't care? 11:48:30  
22 A. No. 11:48:31  
23 [REDACTED] [REDACTED] 11:48:34  
24 [REDACTED] 11:48:38  
25 [REDACTED] 11:48:39

1 [REDACTED] [REDACTED]  
2 [REDACTED] [REDACTED] 11:48:44  
3 [REDACTED] 11:48:54  
4 [REDACTED] 11:48:57  
5 [REDACTED] 11:49:01  
6 [REDACTED] 11:49:04  
7 [REDACTED] 11:49:06  
8 [REDACTED] [REDACTED]  
9 [REDACTED] 11:49:16  
10 [REDACTED] [REDACTED] [REDACTED]  
11 [REDACTED] 11:49:23  
12 [REDACTED] [REDACTED] [REDACTED]  
13 [REDACTED] [REDACTED] [REDACTED]  
14 [REDACTED] [REDACTED]  
15 [REDACTED] [REDACTED]  
16 Q. You're aware that Mr. Levandowski, when asked 11:49:36  
17 whether these files were at Uber, pled the Fifth 11:49:41  
18 Amendment to avoid self-incrimination; right? 11:49:46  
19 MR. KIM: Objection; form. 11:49:47  
20 THE WITNESS: I've read articles that said that, 11:49:48  
21 yes. 11:49:49  
22 BY MR. JAFFE: 11:49:49  
23 [REDACTED] [REDACTED]  
24 [REDACTED] [REDACTED]  
25 [REDACTED] [REDACTED]

1 MR. KIM: Objection; form. 11:50:00

2 THE WITNESS: I'm sorry. 11:50:01

3 BY MR. JAFFE: 11:50:01

4 Q. You think it's a joke? 11:50:02

5 A. I think it's impossible, in my opinion, that 11:50:07

6 those files would be at Uber. 11:50:10

7 Q. How can you possibly know? 11:50:14

8 A. I cannot know, but it strikes me as 11:50:18

9 ridiculous. 11:50:19

10 Q. It strikes you as ridiculous? 11:50:21

11 A. Yeah. 11:50:21

12 Q. You think it's ridiculous that 11:50:24

13 Mr. Levandowski pleads his constitutional right to 11:50:26

14 avoid self-incrimination when asked where these files

15 are and it's ridiculous for us to ask where they are; 11:50:32

16 that's what you think? 11:50:34

17 MR. KIM: Objection; form. 11:50:36

18 THE WITNESS: You're asking my personal opinion. 11:50:38

19 I think it's extremely unlikely to the point of 11:50:43

20 ridiculous that those files are on a computer somehow 11:50:47

21 at Uber after all of the forensics that were done on 11:50:53

22 Anthony's computer, as it was described to us, after 11:50:58

23 all the searching of all the hard drives that we can 11:51:02

24 come up with. 11:51:03

25 BY MR. JAFFE: 11:51:03

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Q. You do know that no one has searched 11:51:07  
2 Mr. Levandowski's personal computer; right? 11:51:10  
3 MR. KIM: Objection; form. 11:51:10  
4 THE WITNESS: I have read that in an article or 11:51:12  
5 two. 11:51:14  
6 BY MR. JAFFE: 11:51:14  
7 Q. And he's refusing to turn those over, again 11:51:17  
8 based on his rights to avoid incriminating himself? 11:51:23  
9 MR. KIM: Objection; form. 11:51:24  
10 THE WITNESS: That's my understanding. 11:51:25  
11 BY MR. JAFFE: 11:51:25  
12 Q. [REDACTED] [REDACTED]  
13 [REDACTED] 11:51:31  
14 MR. KIM: Objection; form. 11:51:31  
15 [REDACTED] [REDACTED] [REDACTED]  
16 [REDACTED] [REDACTED] [REDACTED]  
17 [REDACTED] 11:51:40  
18 BY MR. JAFFE: 11:51:40  
19 Q. [REDACTED] [REDACTED]  
20 [REDACTED] [REDACTED]  
21 [REDACTED] [REDACTED]  
22 MR. KIM: Objection; form. 11:51:50  
23 THE WITNESS: Is that a question? 11:51:51  
24 BY MR. JAFFE: 11:51:51  
25 [REDACTED] [REDACTED] 11:51:53

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 MR. KIM: Objection; form. 11:51:54

2 THE WITNESS: [REDACTED] 11:51:55

3 BY MR. JAFFE: 11:51:55

4 Q. Do you take intellectual property rights 11:51:59

5 seriously? 11:52:01

6 A. Yes. 11:52:01

7 Q. Do you think it's wrong for one company to 11:52:03

8 steal another company's intellectual property rights? 11:52:07

9 A. Yes. 11:52:07

10 Q. Do you think that's a joke? 11:52:10

11 A. No. 11:52:10

12 Q. Do you think that's something that should be 11:52:12

13 taken seriously? 11:52:15

14 A. Yes. 11:52:15

15 Q. [REDACTED] [REDACTED]

16 [REDACTED] [REDACTED]

17 [REDACTED] [REDACTED]

18 MR. KIM: Objection; form. 11:52:35

19 THE WITNESS: No. 11:52:36

20 BY MR. JAFFE: 11:52:36

21 Q. [REDACTED] 11:52:40

22 MR. KIM: Same objection. 11:52:42

23 THE WITNESS: [REDACTED] [REDACTED]

24 [REDACTED] [REDACTED]

25 [REDACTED] [REDACTED]

1 BY MR. JAFFE: 11:52:49  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED] 11:53:02  
6 MR. KIM: Objection; form. 11:53:05  
7 THE WITNESS: I don't know. 11:53:06  
8 BY MR. JAFFE: 11:53:06  
9 Q. You don't know? 11:53:07  
10 A. [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED] 11:53:28  
17 Q. Okay. Turning back to your supplemental 11:53:38  
18 declaration, which is 151. Let's go to paragraph 13. 11:53:46  
19 Actually, before we get there, start with 11:53:51  
20 paragraph 7. 11:53:53  
21 Here you're talking about the fiber lasers in 11:54:00  
22 the Spider design; right? 11:54:01  
23 A. Sorry. 152 or 151? 11:54:05  
24 Q. 152. Excuse me. 11:54:07  
25 A. Sorry. 11:54:08

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 (Witness reviews document.) 11:54:26

2 A. Repeat your question, please. 11:54:27

3 Q. Paragraph 7 of your supplemental declaration, 11:54:30

4 Exhibit 152, is talking about the design of the fiber 11:54:32

5 laser in the Spider? 11:54:36

6 A. Yes. Yes. 11:54:37

7 Q. You don't mention Mr. Levandowski's 11:54:40

8 involvement in paragraph 7, do you? 11:54:43

9 A. No. 11:54:43

10 Q. You don't mention that Mr. Levandowski 11:54:45

11 pointed you to [REDACTED] right? 11:54:52

12 A. No. 11:54:52

13 Q. You don't mention his role in the design of 11:54:55

14 the laser at all in paragraph 7, do you? 11:54:58

15 A. No. 11:55:00

16 Q. All right. Let's go to paragraph 13, talking 11:55:13

17 about Fuji again. So here you're pointing -- you 11:55:27

18 excerpt a document that you say discusses beam spacing 11:55:32

19 and angles for the Fuji design; is that right? 11:55:35

20 A. Yes. 11:55:36

21 Q. And just looking at what's depicted here, 11:55:41

22 where is [REDACTED] mentioned? 11:55:47

23 A. Neither [REDACTED] are mentioned, nor [REDACTED] [REDACTED]

24 [REDACTED]. However, it can be implied 11:56:00

25 from [REDACTED] and it can be implied 11:56:06

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 BY MR. JAFFE: 11:59:09

2 Q. And did you ever discuss the idea to use [REDACTED] [REDACTED]

3 [REDACTED] with Mr. Levandowski? 11:59:19

4 A. No, not that I recall. 11:59:22

5 Q. So when you were presenting the pivot to 11:59:27

6 Mr. Levandowski, it never came up how many transmit 11:59:30

7 boards there would be? 11:59:31

8 A. No. 11:59:31

9 Q. He had no idea? 11:59:33

10 A. He had no idea. 11:59:34

11 Q. And you never discussed with Mr. Levandowski 11:59:40

12 the details of the Fuji design in terms of the number 11:59:43

13 of transmit boards; is that true? 11:59:45

14 A. I don't recall having any discussion like 11:59:48

15 that at all. 11:59:49

16 Q. So you're saying you don't recall? I just 11:59:53

17 want to be clear. 11:59:55

18 A. Yes. 11:59:56

19 Q. So I'll ask my question again. 11:59:58

20 Have you ever discussed with Mr. Levandowski 12:00:01

21 the number of transmit boards in the Fuji design? 12:00:05

22 MR. KIM: Objection; form. 12:00:07

23 THE WITNESS: I don't recall having any discussion 12:00:11

24 about the number of transmit boards. 12:00:14

25 BY MR. JAFFE: 12:00:14

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Q. Are you aware of any conversations between 12:00:17  
2 Mr. Gruver or Mr. Pennecot and Mr. Levandowski 12:00:20  
3 regarding the number of transmit boards in the Fuji 12:00:24  
4 design? 12:00:24  
5 MR. KIM: Objection; form. 12:00:26  
6 THE WITNESS: I am not aware. 12:00:28  
7 BY MR. JAFFE: 12:00:28  
8 Q. So it's possible that they have discussed 12:00:29  
9 this issue with them, you wouldn't know that; right? 12:00:32  
10 A. I wouldn't know that. 12:00:34  
11 Q. So you're not saying that Mr. Levandowski has 12:00:36  
12 never had discussions or input into the idea to use 12:00:40  
13 [REDACTED]; right? 12:00:43  
14 MR. KIM: Objection; form. 12:00:46  
15 THE WITNESS: What I am saying is that Anthony 12:00:48  
16 never had input into my decision with my electrical 12:00:55  
17 engineer to put [REDACTED]. 12:01:00  
18 BY MR. JAFFE: 12:01:00  
19 Q. Right. 12:01:00  
20 But you talked about that decision with 12:01:02  
21 Mr. Gruver, for example; right? 12:01:03  
22 A. I think discussions with Gruver came later, 12:01:07  
23 yeah. 12:01:07  
24 Q. Or Mr. Pennecot, for example? 12:01:10  
25 A. Mr. Pennecot was probably consulted in that 12:01:13

1 process as well. 12:01:14

2 Q. And you're not aware and you can't testify, 12:01:16

3 sitting here today, whether either of those two 12:01:19

4 gentleman discussed this idea with Mr. Levandowski; is 12:01:23

5 that right? 12:01:24

6 MR. KIM: Objection; form. 12:01:25

7 THE WITNESS: I couldn't say. 12:01:25

8 BY MR. JAFFE:

9 Q. So in your declaration or in anywhere, can't 12:01:28

10 say that Mr. Levandowski had no input into the number 12:01:32

11 of boards because you don't know all the conversations 12:01:35

12 that Mr. Levandowski had; fair? 12:01:37

13 MR. KIM: Objection; form. 12:01:37

14 THE WITNESS: No, I disagree with that. 12:01:39

15 BY MR. JAFFE: 12:01:39

16 Q. Why? 12:01:41

17 A. When you go so far as to say input into the 12:01:44

18 design, I don't see how some conversation with Anthony 12:01:49

19 could have influenced what I saw as a need to split 12:01:53

20 the lasers [REDACTED] [REDACTED]

[REDACTED] [REDACTED] 12:01:58

22 Q. So where did you get that idea from? 12:02:01

23 A. I don't recall where the idea came from, but 12:02:12

24 it seemed like a requirement from the beginning. 12:02:16

25 Q. What does that mean? 12:02:17

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1           A.    We knew that we were placing edge-emitting           12:02:22  
2   laser diodes on a flat PCB.   12:02:26

3           Q.    And that was the PCB that Mr. Pennecot           12:02:29  
4   designed; right?   12:02:29

5           A.    Yes.   12:02:29

6           Q.    And that's the board that eventually was sent   12:02:35  
7   to Gorilla in December?   12:02:38

8           A.    That was one of the boards.                       12:02:40

9                    So when we knew we were placing these boards   12:02:48  
10   flat onto a PCB, edge-emitting diodes, and we realized   12:02:53  
11   they [REDACTED] [REDACTED]  
12   [REDACTED] as   12:03:01  
13   I recall, [REDACTED] [REDACTED]  
14   [REDACTED] was obvious.                                       12:03:08

15          Q.    I see.   12:03:08

16                  So you got the board design from Mr. Pennecot   12:03:13  
17   and you knew you wanted 64 channels because you           12:03:17  
18   were -- wanted to do something similar to what           12:03:21  
19   Velodyne was doing and then derivative from that is       12:03:25  
20   how you got to [REDACTED]?                                       12:03:28

21          MR. KIM:  Objection; form.                               12:03:29

22          THE WITNESS:  That's taking it actually out of       12:03:32  
23   sequence.   12:03:33

24          BY MR. JAFFE:   12:03:33

25          Q.    Okay.  Can you put it in sequence, please.       12:03:36

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 A. Yes. 12:03:36

2 We knew we needed a laser circuit, so I had 12:03:40

3 Florin design multiple laser circuits onto a board for 12:03:45

4 test and evaluation. We picked one of those circuits 12:03:48

5 that we thought performed the best. He began 12:03:51

6 considering the size of his circuit in one of those -- 12:03:56

7 I believe it was 10 different circuits. The one we 12:03:59

8 chose, he could look at the design of it and tell me 12:04:02

9 the size. 12:04:04

10 So at this point, as I recall, Gaetan did not 12:04:10

11 have a laser board design in his CAD model. He had a 12:04:20

12 lens design. He may have had -- I even doubt he had 12:04:26

13 taken that into CAD yet. 12:04:29

14 Q. So I'm a little bit confused. 12:04:32

15 Where did the idea to have [REDACTED] come 12:04:34

16 from? 12:04:35

17 [REDACTED] [REDACTED] [REDACTED] [REDACTED]

18 [REDACTED] The need to 12:04:49

19 [REDACTED] developed quickly between 12:04:56

20 Florin and I looking at the size of the circuit, 12:04:59

21 knowing when Scott Boehmke defines a certain [REDACTED] [REDACTED]

22 [REDACTED] when Gaetan has 12:05:08

23 designed a lens that has a 150 millimeter focal 12:05:13

24 length, it becomes apparent that the [REDACTED] [REDACTED]

[REDACTED] 12:05:19

1 [REDACTED] [REDACTED]  
2 [REDACTED] 12:05:24  
3 It was obvious to me that wasn't going to 12:05:26  
4 work and we would have to [REDACTED] [REDACTED]  
5 [REDACTED] Later we went back and looked closer, and I 12:05:33  
6 realized, wait a minute, [REDACTED] [REDACTED]  
7 [REDACTED] So we can't put circuits on [REDACTED] [REDACTED]  
8 [REDACTED] [REDACTED]  
9 [REDACTED] 12:05:47  
10 Furthermore, we were starting to look at 12:05:50  
11 components on the receiver. We saw components on the 12:05:53  
12 receiver that were themselves [REDACTED]. 12:05:58  
13 Those were high voltage components. They needed 12:06:00  
14 additional space between them as well. So it seemed 12:06:01  
15 pretty clear at the time [REDACTED] was not 12:06:05  
16 going to work, so we said [REDACTED] Florin 12:06:09  
17 thought he could [REDACTED]. 12:06:14  
18 So that ended up with [REDACTED] [REDACTED]  
19 [REDACTED] We already had decided two cavities to make 12:06:20  
20 64 channels, so that ended up with [REDACTED] 12:06:24  
21 in the sensor. 12:06:25  
22 Q. Where are the documents that reflect the 12:06:27  
23 discussions that you were just talking about? 12:06:31  
24 A. We did not document our discussions. 12:06:33  
25 Q. Okay. So there are no -- there's no 12:06:35

1 documentary evidence to evidence -- to support what 12:06:39  
2 you just said? 12:06:40  
3 MR. KIM: Objection; form. 12:06:42  
4 BY MR. JAFFE: 12:06:42  
5 Q. Is that fair? 12:06:42  
6 A. Not quite. 12:06:43  
7 We have documents showing and indicating to 12:06:47  
8 us what the vertical angles were to be for the sensor 12:06:52  
9 as specified by Scott Boehmke. We have a lens design 12:06:57  
10 that's documented from Gaetan. We have the original 12:07:03  
11 circuit Florin had developed for testing out lasers. 12:07:10  
12 At that point, the documentation stopped. 12:07:14  
13 And we don't have documents for discussions describing 12:07:22  
14 how [REDACTED] [REDACTED]  
15 [REDACTED]. 12:07:27  
16 Q. Okay. So I just want to run through that 12:07:30  
17 real quick. 12:07:30  
18 So you're saying that you got the idea for 12:07:34  
19 [REDACTED] based on three things. One is the [REDACTED] [REDACTED]  
20 [REDACTED] of the diodes that you wanted. Two is the 12:07:43  
21 [REDACTED]. And three is the [REDACTED] [REDACTED]  
22 [REDACTED]. 12:07:49  
23 Generally, is that fair? 12:07:53  
24 A. I'd like you to add a fourth, which is the 12:07:56  
25 [REDACTED] and possibly a 12:08:04

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1 [REDACTED] [REDACTED]  
2 [REDACTED] 12:08:10  
3 Q. So that's part of the circuitry, though? 12:08:12  
4 A. Yeah.  
5 Q. So if we say number 3 is the [REDACTED] [REDACTED]  
6 [REDACTED] would that capture everything that you're 12:08:19  
7 talking about? 12:08:20  
8 A. With the clarification that circuitry 12:08:22  
9 involves a channel, both receive and transmit, then I 12:08:26  
10 can agree to that. 12:08:27  
11 Q. Fair enough. 12:08:28  
12 So there were three, generally, things, now 12:08:29  
13 that we've kind of established our terminology, that 12:08:33  
14 you say -- 12:08:36  
15 A. Sorry. Did you include the focal length of 12:08:40  
16 the lens Gaetan was designing? 12:08:41  
17 Q. No. 12:08:41  
18 A. That's important. 12:08:43  
19 Q. Okay. So add that as number 4, focal length 12:08:48  
20 of lens. All right. 12:08:51  
21 So the [REDACTED] that you're talking 12:08:54  
22 about -- the issue that you're talking about there is 12:08:58  
23 that [REDACTED] [REDACTED]  
24 [REDACTED] [REDACTED]  
25 [REDACTED]; right? 12:09:08

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 A. I think you misspoke. The resulting [REDACTED] [REDACTED]  
[REDACTED]  
[REDACTED] 12:09:20  
4 Q. I see. 12:09:21  
5 So the fact that you needed to have the 12:09:23  
6 [REDACTED]  
[REDACTED]; is that basically 12:09:31  
8 it or am I messing it up again? 12:09:34  
9 MR. KIM: Objection; form. 12:09:35  
10 THE WITNESS: It was the [REDACTED]  
[REDACTED] -- 12:09:39  
12 BY MR. JAFFE:  
13 Q. I see. 12:09:39  
14 A. -- that required them eventually to [REDACTED]  
[REDACTED]. 12:09:45  
16 Q. And the [REDACTED]  
[REDACTED]; is that right? 12:09:49  
18 A. The [REDACTED]  
[REDACTED]  
[REDACTED]. 12:09:59  
21 Q. And -- okay. And the spacing, that's what 12:10:08  
22 Mr. Boehmke -- continue to mispronounce his name 12:10:14  
23 probably correctly -- he provided to you in November 12:10:16  
24 of 2016? 12:10:17  
25 A. Yes, he provided the angular spacing, if I 12:10:20

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1 may. 12:10:21

2 Q. Okay. We'll get to that a little bit later. 12:10:25

3 Mr. Boehmke didn't provide you how many 12:10:29

4 boards to use; right? 12:10:30

5 A. Right. 12:10:30

6 Q. And then the FAC lens, that was provided by 12:10:35

7 Mr. Pennecot; right? 12:10:36

8 A. That is my understanding. 12:10:39

9 Q. He came up with the FAC lens design; right? 12:10:42

10 A. That's my understanding. 12:10:44

11 Q. And it's a [REDACTED] FAC lens; right? 12:10:47

12 MR. KIM: Objection; form. 12:10:48

13 THE WITNESS: It's [REDACTED]. 12:10:51

14 BY MR. JAFFE: 12:10:51

15 Q. That's larger than -- sorry. 12:10:53

16 A. It's [REDACTED] [REDACTED]

17 [REDACTED] 12:10:59

18 Q. Do you know how large the FAC lenses are for 12:11:03

19 Velodyne's devices? 12:11:05

20 [REDACTED] [REDACTED]

21 [REDACTED] [REDACTED]

22 [REDACTED] [REDACTED]

23 Q. Do you know how large it is?

24 A. Are you asking diameter or are you asking

25 length?

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1 Q. To compare it to [REDACTED]. 12:11:17

2 A. To compare it to [REDACTED] [REDACTED]

3 [REDACTED] 12:11:24

4 Q. And so that lens design came from 12:11:30

5 Mr. Pennecot and the circuitry came from Florin; is 12:11:33

6 that right? 12:11:34

7 A. Yes. 12:11:34

8 Q. So none of those folks came up with [REDACTED] [REDACTED]

9 [REDACTED]; right? 12:11:45

10 MR. KIM: Objection; form. 12:11:47

11 THE WITNESS: They were certainly involved in the 12:11:49

12 decision to go to [REDACTED] because I 12:11:53

13 had to consult with them in terms of what would be 12:11:56

14 possible for circuit spacing, in the case of Florin. 12:12:00

15 And to make sure that Gaetan's group lens can handle 12:12:06

16 the [REDACTED]. 12:12:09

17 BY MR. JAFFE:

18 Q. And just to go back to your declaration here, 12:12:12

19 this diagram that you're showing in Figure 6 in 12:12:16

20 paragraph 13, there's no discussion in here of [REDACTED] [REDACTED]

21 [REDACTED]; right? 12:12:22

22 A. There's no discussion of [REDACTED] [REDACTED]

23 [REDACTED] in Figure 6. Although if you understand Figure 12:12:31

24 6, it could be easily derived. 12:12:36

25 Q. That wasn't my question. 12:12:36

1 Q. So just going back to what we were talking 12:23:09  
2 about earlier, you're saying that Mr. Boehmke provided 12:23:12  
3 you the custom beam spacing and you imported that data 12:23:17  
4 into Zemax to determine the resultant emitting points 12:23:23  
5 of the laser diodes, and those you just picked as a 12:23:28  
6 first matter, [REDACTED] 12:23:32  
7 MR. KIM: Objection; form. 12:23:36  
8 THE WITNESS: We didn't pick it as first matter. 12:23:38  
9 We discussed this already, that I would have loved to 12:23:41  
10 [REDACTED] and we found we couldn't do 12:23:45  
11 that. [REDACTED] We decided we had 12:23:45  
12 to [REDACTED] [REDACTED]  
13 [REDACTED] That decision went 12:23:58  
14 into the first -- earliest CAD designs of the optical 12:24:04  
15 cavity for Fuji. 12:24:06  
16 BY MR. JAFFE: 12:24:06  
17 Q. So you didn't do any sort of other Zemax 12:24:08  
18 simulations of other board and diode arrangements? 12:24:14  
19 A. I'm not aware. I don't recall doing any CAD 12:24:19  
20 designs for other board arrangements. 12:24:23  
21 Q. So by November 4th, 2016, you and your team 12:24:29  
22 had already arrived at [REDACTED] [REDACTED]  
23 [REDACTED]; is that right? 12:24:35  
24 A. It's possible that that was by November 4th. 12:24:40  
25 It's also possible that it was shortly after the 4th. 12:24:44

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1 Q. So you -- sorry. 12:24:46

2 A. There's a potential for a time lag from 12:24:50

3 Scott's prescribed beam angles and when we actually 12:24:55

4 did the determination of six total boards and got 12:24:59

5 those into a CAD model. 12:25:01

6 Q. And you only started the Fuji project at the 12:25:03

7 end of October; right? 12:25:05

8 A. Yes.

9 Q. So you came up with the [REDACTED] [REDACTED]

10 [REDACTED] design in a week, approximately? 12:25:14

11 MR. KIM: Objection; form. 12:25:16

12 THE WITNESS: I don't know if it was exactly a 12:25:17

13 week. Or could have been more than a week, but it was 12:25:20

14 something on the order of a week. 12:25:22

15 BY MR. JAFFE: 12:25:22

16 Q. About a week? 12:25:24

17 A. Within some small multiple of one week. One 12:25:30

18 week, two weeks, three weeks possible, yes, on a very 12:25:34

19 short time scale. 12:25:36

20 Q. And you didn't -- after receiving these beam 12:25:41

21 spacings from Mr. Boehmke, you didn't even consider 12:25:44

22 other designs other than [REDACTED] [REDACTED]

23 [REDACTED]; right? 12:25:51

24 A. That feels a little out of sequence. So I 12:25:59

25 believe we got the angles from Scott for our sensor. 12:26:05

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1 The decision for how many boards to place them on 12:26:08  
2 would have to occur after we knew what those angles 12:26:12  
3 were. 12:26:13

4 Q. So you got the custom beam spacing from 12:26:32  
5 Mr. Boehmke; and then one to three weeks later, you 12:26:37  
6 knew you were doing [REDACTED] [REDACTED]

7 [REDACTED] 12:26:43

8 A. Yes. 12:26:43

9 Q. And at that time, in between receiving 12:26:46  
10 Mr. Boehmke's custom beam spacing, you didn't 12:26:50  
11 consider -- even consider any other designs other than 12:26:52

12 [REDACTED]; 12:26:57

13 right? 12:26:57

14 A. No. When Scott gave us the prescribed 12:27:02  
15 angles, we had to first consider [REDACTED] [REDACTED]

16 [REDACTED] And that was the process we've already 12:27:07

17 discussed to arrive at [REDACTED], but that's after 12:27:11

18 Scott originally told us what the angles would be. 12:27:14

19 Q. But I'm confused. 12:27:15

20 Because when we were talking earlier about 12:27:17

21 after you received the data, you said you only 12:27:19

22 provided one summary into Zemax and that was [REDACTED] [REDACTED]

23 [REDACTED]. 12:27:24

24 A. Yes. 12:27:24

25 Q. So you didn't even -- when you were looking 12:27:27

1 Google? 12:29:47

2 A. No. 12:29:47

3 Q. You didn't have any understanding? 12:29:49

4 A. No. 12:29:49

5 Shall we go back to our list in terms of 12:29:56

6 elements that are important? 12:29:57

7 Q. Let me see if I can short-circuit this. 12:30:00

8 My understanding is you're saying they were 12:30:02

9 all required, so one isn't more important than the 12:30:06

10 other; is that fair? 12:30:07

11 A. That's fair. 12:30:08

12 Q. So then we don't need to go through them. 12:30:11

13 Let's turn to page 17 of your declaration. 12:30:14

14 A. Page or paragraph? 12:30:17

15 Q. Excuse me. Paragraph 17. 12:30:21

16 A. Okay. 12:30:21

17 Q. It's on page 11. 12:30:23

18 A. Thank you. 12:30:24

19 Q. And I'm in your supplemental declaration, 12:30:28

20 which is 152. 12:30:30

21 MR. KIM: What paragraph? 12:30:34

22 MR. JAFFE: 17. It's the long paragraph, so it's 12:30:38

23 page 11 if you're looking for it. 12:30:40

24 BY MR. JAFFE: 12:30:40

25 Q. So there are two things labeled here, Figure 12:30:45

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1	8A and 8B.	12:30:48
2	Do you see that?	12:30:49
3	A. Yes.	12:30:49
4	Q. So just for clarification here, the letters	12:30:55
5	that are on there, those are letters that you added	12:30:58
6	for purposes of your declaration; right?	12:30:59
7	A. Yes, those were added for this declaration.	12:31:04
8	Q. In the document as it was created in November	12:31:06
9	2016, it did not have these letters on it; right?	12:31:09
10	A. Right.	12:31:09
11	Q. So this is a modified version for your	12:31:12
12	declaration?	12:31:13
13	A. Yes.	12:31:14
14	Q. And if we go to the November 2016 data that	12:31:22
15	you were looking at that formed the basis of this, it	12:31:28
16	did not include these letterings; right?	12:31:29
17	A. Right.	12:31:29
18	Q. So in November 2016, there was no --	12:31:36
19	Mr. Boehmke did not provide the distribution of these	12:31:40
20	beams onto particular boards; right?	12:31:43
21	A. Right.	12:31:43
22	Q. So the November 2016 data from Mr. Boehmke,	12:31:55
23	that did not provide any information as to how these	12:31:59
24	beams would be distributed [REDACTED]	[REDACTED]
	[REDACTED]; right?	12:32:04

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1 Q. So no one should be confused as to whether 12:33:30  
2 this data is originally from November 2016 in terms of 12:33:35  
3 the [REDACTED]: right? 12:33:37

4 A. Nobody should be confused that the [REDACTED] 12:33:41  
5 had come from Scott, because it did not. 12:33:43

6 Q. Right. You added it in here for purposes of 12:33:45  
7 your declaration? 12:33:46

8 A. Yeah. 12:33:46

9 Q. All right. So you've mentioned -- I want to 12:33:50  
10 just clarify a little bit of terminology here. What's 12:33:55  
11 shown here at the end of paragraph 17 is talking about 12:34:00  
12 angles; right? 12:34:01

13 A. Right. 12:34:01

14 Q. And what angle are we talking about? 12:34:04

15 A. We're talking about the vertical angle 12:34:08  
16 reference to a horizontal plane measured in degrees 12:34:12  
17 such that positive numbers are above horizontal, 12:34:18  
18 negative numbers are below horizontal. 12:34:20

19 Q. Okay. Are you familiar with the concept of 12:34:23  
20 beam spacing? 12:34:24

21 A. Perhaps you could clarify. 12:34:26

22 Q. Let's go back to the prior page. And to page 12:34:35  
23 10. The heading, do you see it says "Beam spacing in 12:34:41  
24 Fuji"? 12:34:41

25 A. Um-hum. 12:34:42

1 Q. "Beam spacing," what do you mean? 12:34:44

2 A. So beam spacing can be used to refer to the 12:34:49

3 [REDACTED] [REDACTED]

4 [REDACTED] Since it refers to [REDACTED] [REDACTED]

5 [REDACTED] [REDACTED]

6 [REDACTED]. 12:35:10

7 Q. When you are saying [REDACTED] -- what you're 12:35:12

8 saying -- when you're talking about [REDACTED] [REDACTED]

9 [REDACTED] [REDACTED]

10 [REDACTED]; is that fair? 12:35:20

11 A. That's fair. 12:35:20

12 Q. Just to be clear, again, when -- we're going 12:35:24

13 back to the end of paragraph 17. You are not talking 12:35:27

14 about [REDACTED] [REDACTED]

15 [REDACTED] right? 12:35:33

16 MR. KIM: Objection; form. 12:35:36

17 THE WITNESS: This does not refer to the absolute 12:35:38

18 positions of the diodes. I'm referring to the end of 12:35:40

19 paragraph 17. The figure refers to the angular 12:35:44

20 prescribed angles. 12:35:47

21 BY MR. JAFFE: 12:35:47

22 Q. So I want to introduce a new term here. 12:35:50

23 You're familiar -- when we have the diodes, 12:35:53

24 one way that they're represented, they're position is 12:35:56

25 X and Y; right? 12:35:58

1 A. Right. 12:35:58

2 Q. And I want to refer to the difference between 12:36:02

3 two diodes on the Y axis as vertical spacing. 12:36:07

4 Do you understand what I'm referring to? 12:36:08

5 A. Yes. 12:36:08

6 Q. What you're talking about here in paragraph 12:36:10

7 17 does not show the differences in the vertical 12:36:12

8 spacing between the diodes; right? 12:36:16

9 MR. KIM: Objection; form. 12:36:17

10 THE WITNESS: Agreed, paragraph 16 does not refer 12:36:20

11 to vertical -- 12:36:22

12 BY MR. JAFFE: 12:36:22

13 Q. 17. 12:36:22

14 A. Sorry. In paragraph 17, we are not referring 12:36:26

15 to --

16 MR. KIM: Same objection. 12:36:28

17 THE WITNESS: -- the vertical dimension on a laser 12:36:30

18 board. 12:36:31

19 BY MR. JAFFE:

20 Q. So the [REDACTED], that's 12:36:35

21 here at the end of 17, that's not referring to the 12:36:36

22 [REDACTED] 12:36:39

23 in Fuji; right? 12:36:40

24 MR. KIM: Objection; form. 12:36:42

25 THE WITNESS: That's right. 12:36:43

1 MR. KIM: We've been going over an hour. Can we 12:37:24  
2 break for lunch? 12:37:26  
3 MR. JAFFE: Yes, we can break. 12:37:28  
4 THE VIDEOGRAPHER: We are off the record at 12:37 12:37:30  
5 p.m. 12:37:30  
6 (Lunch recess was taken at 12:37 p.m.) 12:37:30  
7 (Nothing omitted or deleted. See next page).  
8  
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1 AFTERNOON SESSION 1:38 P.M.  
2 - - -  
3 THE VIDEOGRAPHER: We are back on the record at 13:38:23  
4 1:38 p.m. 13:38:24  
5 EXAMINATION RESUMED 13:38:24  
6 BY MR. JAFFE: 13:38:24  
7 Q. Welcome back. 13:38:28  
8 A. Thank you. 13:38:28  
9 Q. I want to turn to your original declaration. 13:38:31  
10 I think it's 151. And in particular, in paragraph 20, 13:38:39  
11 you state, "There are approximately [REDACTED] employees 13:38:41  
12 currently working on the Fuji project." 13:38:44  
13 Is that right? 13:38:45  
14 A. Yes, I see it. 13:38:48  
15 Q. How many employees are working at Uber on 13:38:54  
16 LiDAR-related responsibilities? 13:38:56  
17 MR. KIM: Objection; form. 13:39:02  
18 THE WITNESS: There would be approximately [REDACTED] 13:39:03  
19 employees at Uber working on LiDAR responsibilities 13:39:06  
20 that I'm aware of. 13:39:10  
21 BY MR. JAFFE: 13:39:10  
22 Q. Your understanding is that there are only [REDACTED] 13:39:12  
23 employees at Uber with LiDAR-related responsibilities; 13:39:16  
24 is that right? 13:39:17  
25 MR. KIM: Objection; form. 13:39:19

1 THE WITNESS: When I came up with the number, I 13:39:22  
2 wanted to pick ones -- employees that had primary 13:39:26  
3 responsibilities on LiDAR. 13:39:29  
4 BY MR. JAFFE: 13:39:29  
5 Q. So let me ask my question again then. 13:39:32  
6 What is the number of employees at Uber that 13:39:37  
7 have LiDAR-related responsibilities or projects? 13:39:43  
8 MR. KIM: Objection; form. 13:39:43  
9 THE WITNESS: I don't know off the top of my head 13:39:46  
10 how many more employees have minor LiDAR 13:39:48  
11 responsibilities. 13:39:50  
12 BY MR. JAFFE: 13:39:50  
13 Q. So when you're talking about this number of 13:39:52  
14 employees here, you're not talking about the number of 13:39:54  
15 employees working on LiDAR entirely at Uber; right? 13:39:59  
16 MR. KIM: Objection; form. 13:40:02  
17 THE WITNESS: Correct. I believe there may be a 13:40:07  
18 few more employees that also have some minor 13:40:11  
19 responsibility for LiDAR activities. 13:40:15  
20 BY MR. JAFFE: 13:40:15  
21 Q. What LiDAR technology are they working on? 13:40:18  
22 A. They're not working on LiDAR technology. 13:40:21  
23 They're working on perhaps sourcing components, just 13:40:26  
24 general supply chain people. 13:40:28  
25 Q. Okay. Are there any other LiDAR projects 13:40:32

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1 within Uber other than the Fuji project? 13:40:35

2 A. No, there's not. 13:40:37

3 Q. You're not working on building LiDARs with 13:40:40

4 third-party companies? 13:40:42

5 MR. KIM: Objection; form. 13:40:44

6 THE WITNESS: I'm not working on LiDAR projects 13:40:48

7 with third-party companies. 13:40:50

8 BY MR. JAFFE: 13:40:50

9 Q. Right. So let me ask my question a little 13:40:53

10 bit differently. 13:40:53

11 Is Uber working on designing LiDARs with 13:40:58

12 third-party companies? 13:40:59

13 MR. KIM: Objection; form. 13:41:00

14 THE WITNESS: I think Scott Boehmke is working 13:41:05

15 with some third-party LiDAR suppliers. 13:41:09

16 BY MR. JAFFE: 13:41:09

17 Q. Who's he working with? 13:41:12

18 A. I am aware of [REDACTED] 13:41:13

19 Q. Um-hum.

20 A. There's [REDACTED]. There is -- and I'll say 13:41:31

21 this confidential information. There's [REDACTED] 13:41:35

22 I'm not aware of any others at this point. 13:41:40

23 MR. KIM: At this point I'll just designate the 13:41:42

24 transcript attorneys' eyes only. 13:41:46

25 MR. JAFFE: What number are we at? 13:41:48

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1 THE REPORTER: 153. 13:41:50

2 MR. JAFFE: Okay. So this is going to be 153. 13:41:53

3 (Plaintiff's Exhibit 153 was marked.) 13:42:07

4 BY MR. JAFFE:

5 Q. So I'll just tell you for the record, this 13:42:09

6 was a document that Uber's lawyers prepared and 13:42:13

7 submitted to the court. That's where we got this 13:42:17

8 from. 13:42:18

9 A. Um-hum. 13:42:19

10 Q. Now, you were talking earlier about [REDACTED] folks 13:42:23

11 working on the Fuji project and that that's the only 13:42:26

12 LiDAR project. If you look at Section 2 here -- and 13:42:29

13 you can see my handwriting on this copy. Actually, I 13:42:33

14 hope my math is right, but on the bottom, on the 13:42:36

15 second page, I totaled it up. And I counted about [REDACTED] 13:42:40

16 employees here that said that they have LiDAR-related 13:42:43

17 responsibilities or projects. 13:42:45

18 A. Okay. 13:42:46

19 Q. What are those other folks doing? 13:42:48

20 A. I don't know what all these other people are 13:42:56

21 doing. So, for instance -- shall we just go down the 13:43:06

22 list? 13:43:06

23 Q. Well, let me ask generally. 13:43:09

24 If they're not working on Fuji, but they're 13:43:11

25 working on LiDAR, what are they working on? 13:43:15

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1           A.    If they're not working on Fuji . . . so let's   13:43:20  
2    take -- I don't know if Phillip Haban, I don't know   13:43:26  
3    what he's working on. I don't know Jacob Fischer. I   13:43:31  
4    don't know what he's working on. Robert Doll,       13:43:34  
5    he's -- I know he's an employee for the Pittsburgh   13:43:40  
6    team. He's related to the hardware group or some   13:43:47  
7    manufacturing aspect of that, but I don't know what   13:43:50  
8    he's working on.   13:43:52

9           Sean Chin, I don't know who that is. Not       13:44:07  
10   sure who Jay Kuvelker is and what he's working on.   13:44:13  
11   Anthony Levandowski, he's a manager. I don't know how   13:44:19  
12   he's working on Fuji or what he's working on. I would   13:44:23  
13   say he's not working on Fuji, but we already           13:44:27  
14   established that.   13:44:28

15          Q.    Actually, why don't we pause there for a   13:44:30  
16   second.   13:44:30

17                For the [REDACTED] employees in your declaration,   13:44:32  
18   does that include Mr. Levandowski?                     13:44:34

19          A.    No.   13:44:34

20          Q.    So if he has LiDAR-related responsibilities   13:44:37  
21   or projects here in Section 2 of this document, you   13:44:42  
22   don't know what those are; is that fair?               13:44:44

23          A.    I would say so.                             13:44:45

24                And if I can be more clear about the [REDACTED]   13:44:53  
25   employees currently working on the Fuji project, I do   13:44:56

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1 mean people working directly on the Fuji project. I 13:45:00  
2 did not include people who were some levels of 13:45:03  
3 management up who had some sort of dotted line or 13:45:06  
4 eventual path of ownership or responsibility. I was 13:45:12  
5 coming up with [REDACTED] as people that I felt I could 13:45:14  
6 solidly say would be adversely affected if the Fuji 13:45:19  
7 project ended. 13:45:21

8 So there's still a lot of names on here. For 13:45:29  
9 instance, take Ana Rayo, she's in a supply chain 13:45:32  
10 group. She's responsible, I think, for some aspects 13:45:36  
11 of receiving material. I would not have counted her 13:45:39  
12 as primarily working on Fuji. 13:45:41

13 Q. Let me actually just stop you and ask a 13:45:44  
14 different question, which is, how many of these people 13:45:47  
15 you don't know what they're doing in terms of LiDAR 13:45:51  
16 work. Can you just provide me a count? 13:45:54

17 A. Yep. 13:45:55

18 Q. And, actually, why don't we do this, I'm 13:46:01  
19 going to hand you a pen. And why don't you just mark 13:46:04  
20 the people that you don't know what they're doing with 13:46:06  
21 LiDAR. 13:46:07

22 A. With LiDAR in general. Okay. 13:46:09

23 Q. Well, let me state it this way: You don't 13:46:11  
24 know why they're on this list of "Defendants' 13:46:15  
25 Officers, Directors, and Employees with LiDAR-Related 13:46:17

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Responsibilities Or Projects"? 13:46:18

2 A. Okay. I will mark those. 13:46:20

3 (Witness complies.) 13:46:20

4 Okay. So these -- I've marked -- 13:48:19

5 Q. Can I have my pen back. 13:48:21

6 A. Sorry. 13:48:21

7 I've marked those for whom I don't know what 13:48:24

8 they're working on. 13:48:25

9 Q. Can you just tell me how many you've marked? 13:48:28

10 A. Sorry. 13:48:29

11 Thirteen.

12 Q. So those are 13 employees that Uber's lawyers 13:48:40

13 said had LiDAR-related responsibilities or projects 13:48:43

14 and they don't work on the Fuji, but you don't know 13:48:46

15 what they work on? 13:48:47

16 A. That's correct, to my knowledge. 13:48:50

17 Q. And then you mentioned that Uber was working 13:48:52

18 with some suppliers, third parties, on LiDAR and you 13:48:56

19 mentioned [REDACTED] And then what else? 13:49:00

20 A. [REDACTED] 13:49:01

21 Q. [REDACTED] 13:49:02

22 Anyone else? 13:49:05

23 A. Perhaps, yeah. [REDACTED] I don't think I'm 13:49:28

24 aware of any other development activities. 13:49:32

25 Q. So let's look at Section 3 here. You see it 13:49:37

1 says, "List of defendant suppliers and consultants who 13:49:40  
2 have LiDAR-related responsibilities or projects"? 13:49:42  
3 A. Okay. 13:49:43  
4 Q. Is [REDACTED] listed here? 13:49:59  
5 A. Nope. 13:49:59  
6 Q. So [REDACTED] is a LiDAR supplier that's not 13:50:03  
7 listed on this list of defendant suppliers? 13:50:07  
8 MR. KIM: Objection; form. 13:50:10  
9 THE WITNESS: Yes. 13:50:11  
10 BY MR. JAFFE: 13:50:11  
11 Q. What about [REDACTED]; is that on here? 13:50:15  
12 A. Nope. 13:50:22  
13 Q. Okay. And what about [REDACTED] is that on 13:50:29  
14 here? 13:50:29  
15 A. Nope. 13:50:34  
16 Q. And then I think [REDACTED] actually is on here; 13:50:38  
17 right? 13:50:38  
18 A. Yes. 13:50:41  
19 Q. And what are you guys doing with [REDACTED]? 13:50:45  
20 A. I believe -- I believe we're buying some demo 13:50:51  
21 units or some early evaluation units. 13:50:54  
22 Q. You're working with them on designing a 13:50:58  
23 custom LiDAR; right? 13:50:59  
24 A. They're developing a new LiDAR. I don't know 13:51:02  
25 that it's custom for us or just -- I don't know that 13:51:05

1 detail.

2 Q. Are you providing them any Uber confidential 13:51:09  
3 information.

4 A. I'm not aware of that happening, no. 13:51:12

5 Q. So there is no Uber confidential information 13:51:16  
6 that is going from Uber to [REDACTED]; is that true? 13:51:21

7 A. I'm not aware of any. 13:51:23

8 MR. JAFFE: Let's mark -- where is that thing? 13:51:31  
9 This one? No. It's this one. This is going to be 13:51:45  
10 Exhibit . . . 13:51:48

11 THE REPORTER: 154. 13:51:50

12 MR. JAFFE: -- 154. 13:51:50

13 Thank you. 13:51:52

14 (Plaintiff's Exhibit 154 was marked.) 13:52:13

15 BY MR. JAFFE:

16 Q. So I've marked as Exhibit 159 [sic] a 13:52:15  
17 document that's heavily redacted. But I just want to 13:52:17  
18 ask --

19 MR. KIM: 159? 13:52:21

20 MR. JAFFE: Yeah, Exhibit 159. 13:52:24

21 MR. KIM: 154. 13:52:25

22 MR. JAFFE: Oh, my handwriting is off. 13:52:27

23 BY MR. JAFFE: 13:52:27

24 Q. 154 is a document that's heavily redacted. 13:52:31

25 Is this an e-mail exchange with [REDACTED] 13:52:36

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 A. If it is, I'm not aware. 13:52:43

2 Q. You can't tell because of the redaction; 13:52:44

3 right? 13:52:45

4 A. I'm also looking at the names. The name 13:52:50

5 addresses. And I can't say it's an exchange with 13:52:54

6 [REDACTED] because I see only Uber or Uber ATC employees. 13:52:59

7 Q. Right. 13:52:59

8 But if you look on the earlier e-mails, the 13:53:05

9 other e-mails are redacted. 13:53:06

10 A. Oh, okay. All right. 13:53:10

11 Q. So, for example, if you go to the page 12132. 13:53:17

12 Do you see that?

13 A. 12132, yes. 13:53:20

14 Q. "Hey, Anthony, been trying to reach you a 13:53:23

15 while via text." 13:53:24

16 A. Okay. 13:53:25

17 Q. You were cc'd on this; right? 13:53:27

18 A. Yes. 13:53:27

19 Q. What is this e-mail about? 13:53:29

20 (Witness reviews document.) 13:54:11

21 A. I'm not 100 percent sure. Yeah, I'm not sure 13:54:28

22 who [sic] this is about. 13:54:30

23 Q. It's hard to tell with the redactions, huh? 13:54:34

24 A. It is. 13:54:35

25 Q. Yeah, I agree with you. 13:54:37

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1 [REDACTED] while the final dimensions it would 13:56:40  
2 be used for fiducial-based diode placement is not yet 13:56:53  
3 defined for [REDACTED]. 13:56:56  
4 MR. JAFFE: Let's mark as Exhibit 155 a document 13:57:01  
5 entitled, "Exhibit B." 13:57:03  
6 BY MR. JAFFE:  
7 Q. It looks like you have it. 13:57:06  
8 A. Yes. 13:57:06  
9 Q. Did you bring your declaration with you? 13:57:08  
10 A. Yeah. 13:57:09  
11 Q. Why don't we look at your copy then, but 13:57:11  
12 we'll just mark this for the record so we have a 13:57:14  
13 complete record. 13:57:15  
14 MR. JAFFE: Just for the record, I'm marking 13:57:19  
15 Exhibit B as 155. And Mr. Haslim is looking at his 13:57:24  
16 own copy. 13:57:25  
17 (Plaintiff's Exhibit 155 was marked.) 13:57:26  
18 BY MR. JAFFE: 13:57:26  
19 Q. So on the top right-hand side, there's a 13:57:32  
20 little picture of a transmit board; right? 13:57:33  
21 A. Right. 13:57:33  
22 Q. And that's an image of one of the Fuji 13:57:37  
23 transmit boards; correct? 13:57:38  
24 A. Correct. 13:57:38  
25 Q. And the table below, that includes some X,Y 13:57:44

1 and theta values for each of the diodes on the 13:57:50  
2 transmit board depicted there? 13:57:53  
3 A. Yes. 13:57:53  
4 Q. So what does [REDACTED] refer to in this 13:57:58  
5 chart? 13:57:59  
6 A. In this chart, the term [REDACTED] labels 13:58:06  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]. 13:58:21  
10 Q. And why are you providing [REDACTED] 13:58:27  
11 [REDACTED]?  
12 A. I believe the person who made this file 13:58:34  
13 provided [REDACTED]  
14 [REDACTED] -- that's the 13:58:44  
15 wrong term -- so that [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED] And these dimensions never left the 13:59:06  
20 document. 13:59:07  
21 Q. "These dimensions never left the document," 13:59:11  
22 what do you mean? 13:59:12  
23 A. The dimensions labeled [REDACTED] remain in 13:59:15  
24 this document even as new information is being added 13:59:19  
25 [REDACTED]. 13:59:23

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Q. So the X and Y data here shows -- [REDACTED] [REDACTED]  
[REDACTED]  
[REDACTED]; right? 13:59:35  
4 A. Yes. 13:59:36  
5 Q. So the X and Y data for [REDACTED] shows 13:59:39  
6 [REDACTED]  
[REDACTED]  
[REDACTED]; right? 13:59:48  
9 A. Right.  
10 Q. Okay. And you said the person who created 13:59:56  
11 this document. 13:59:57  
12 Who are you referring to? 13:59:59  
13 A. This document would have been created by 14:00:03  
14 Gaetan Pennecot. 14:00:05  
15 Q. And why would Mr. Pennecot include [REDACTED] [REDACTED]  
[REDACTED] in this document? 14:00:13  
17 A. Gaetan did the original [REDACTED] [REDACTED]  
[REDACTED]  
[REDACTED]. And he was responsible 14:00:27  
20 for [REDACTED] [REDACTED]  
[REDACTED] This information would 14:00:36  
22 then have been given to our electrical engineer, who 14:00:38  
23 did [REDACTED] for this. 14:00:40  
24 Q. So that doesn't answer my question. 14:00:43  
25 Why is [REDACTED] 14:00:45

1 [REDACTED] [REDACTED] [REDACTED]  
2 [REDACTED] 14:00:49  
3 A. I'm sorry. I don't think I was clear before. 14:00:53  
4 When Gaetan designed the outline of this 14:00:56  
5 board and specified [REDACTED] [REDACTED]  
6 [REDACTED] [REDACTED]  
7 [REDACTED] [REDACTED] [REDACTED]  
8 [REDACTED] [REDACTED]  
9 [REDACTED] [REDACTED]  
10 [REDACTED] 14:01:17  
11 Q. So the original idea was [REDACTED] [REDACTED]  
12 [REDACTED]? 14:01:22  
13 A. No. 14:01:22  
14 Q. So then let me ask my question again then. 14:01:25  
15 What is the point of including [REDACTED] [REDACTED]  
16 [REDACTED] -- in this chart? 14:01:30  
17 A. This information could have been provided to 14:01:36  
18 the electrical engineer so that [REDACTED] [REDACTED]  
19 [REDACTED]. 14:01:43  
20 And if he hasn't [REDACTED] [REDACTED]  
21 [REDACTED] [REDACTED]  
22 [REDACTED] [REDACTED] 14:01:55  
23 Q. Why do you think he did that? 14:01:57  
24 A. He needs to [REDACTED] that's as 14:02:00  
25 good as -- better than an outline of a board which is 14:02:03

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 A. These are six decimal places. 14:06:06

2 Q. Is that pretty accurate? 14:06:08

3 A. It's an unnecessary number of decimals. This 14:06:10

4 goes to nanometers. 14:06:13

5 Q. Yeah. So this is talking about aligning the 14:06:16

6 diodes to the nanometer; is that fair? 14:06:18

7 A. No. 14:06:18

8 Q. No? I thought you said it goes to 14:06:21

9 nanometers. 14:06:22

10 A. It goes to nanometers, but I don't think 14:06:24

11 anybody was under the impression that we're actually 14:06:25

12 in a position to get something to a nanometer scale.

13 Q. But that's what this document is listing? 14:06:28

14 A. This document lists the ideal dimension, yes, 14:06:32

15 down to the nanometer. 14:06:34

16 Q. Got it. 14:06:35

17 We talked about X. 14:06:38

18 Y, that talks about the millimeters 14:06:41

19 difference from the fiducial to A1 on the -- in the 14:06:48

20 vertical axis; right? 14:06:50

21 A. Right. 14:06:50

22 Q. [REDACTED] 14:06:56

23 [REDACTED] 14:07:03

24 MR. KIM: Objection; form. 14:07:06

25 THE WITNESS: [REDACTED] 14:07:09

1

2

3

4

5

6

7

8

BY MR. JAFFE:

9

Q. The theta column here, what does that tell

14:07:36

14:07:42

10

us?

14:07:42

11

A. That tells us, relative to some zero angle on

14:07:50

12

this board, which we can presume is either vertical or

14:07:55

13

horizontal, the ideal placement angle for the laser

14:08:00

14

diode on the board.

14:08:02

15

Q. We're just talking about A again, Board A.

14:08:11

16

Which is the

17

?

14:08:22

18

A. As the light is projected out past the

14:08:26

19

sensor, the

14:08:32

20

Q. All right. Am I correct then that

21

?

14:08:44

22

A. Yes, that's correct.

14:08:45

23

Q. Okay. So is it fair to say that

24

25

?

14:09:01

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 A. In this coordinate system, that's true. 14:09:04

2 Q. Referring to Board A, the diodes go from -- 14:09:15

3 [REDACTED]

4 [REDACTED] 14:09:23

5 A. Yes. 14:09:23

6 Q. Okay. 14:09:27

7 MR. JAFFE: So what I'd like to do is mark as a 14:09:36

8 new exhibit Exhibit 156. 14:09:41

9 (Plaintiff's Exhibit 156 was marked.) 14:10:07

10 BY MR. JAFFE:

11 Q. I'm going to hand you a calculator as well. 14:10:10

12 A. Okay. 14:10:11

13 Q. So what we have here is a reproduction, if we 14:10:17

14 cut and paste correctly, which I think that we did, of 14:10:21

15 the data that's here for Board A in Exhibit B to your 14:10:27

16 declaration. And you can see on the right that I've 14:10:33

17 left open something called delta Y. 14:10:36

18 A. Yes. 14:10:37

19 Q. Do you see that? 14:10:38

20 A. Yes. 14:10:38

21 Q. And do you understand what I'm trying to 14:10:41

22 refer to here by "delta Y"? 14:10:43

23 A. Yes. I'll go ahead and identify what I 14:10:46

24 believe you intend by "delta Y." 14:10:48

25 Q. But before you do, I will tell you exactly 14:10:50

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 starting one, so that can be blank. And you can start 14:12:07  
2 from the next one.

3 A. Perfect. So I will calculate these. 14:12:11

4 (Witness performs calculations.) 14:12:11

5 A. Okay. 14:16:45

6 Q. Thank you. You're handing this to me for me 14:16:48

7 to look at. All right. I'm going to hand it back to 14:16:59

8 you. 14:16:59

9 Exhibit 156 now reflects you've penciled in 14:17:03

10 the delta Y here. 14:17:07

11 In looking at this completed table, would you 14:17:13

12 agree that the delta Y values [REDACTED]

[REDACTED] 14:17:24

14 MR. KIM: Objection; form. 14:17:24

15 THE WITNESS: Yes, I would agree that the delta Y 14:17:31

16 values [REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] 14:17:41

19 BY MR. JAFFE: 14:17:41

20 Q. Okay. In other words, [REDACTED]

[REDACTED]

[REDACTED] 14:17:52

23 MR. KIM: Objection; form. 14:17:55

24 THE WITNESS: It's true, the delta Y, [REDACTED]

[REDACTED] 14:18:01

1 [REDACTED] --

2 THE REPORTER: I'm sorry, I'm sorry. It's  
3 true . . .

4 THE WITNESS: [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED] 14:18:24

8 BY MR. JAFFE: 14:18:24

9 Q. And as we talked about before, as the 14:18:30

10 [REDACTED]

11 [REDACTED]

12 [REDACTED] right? 14:18:41

13 MR. KIM: Objection; form. 14:18:43

14 THE WITNESS: Yes, we agreed -- I agree that the 14:18:46

15 [REDACTED]

16 [REDACTED]

17 [REDACTED] 14:19:01

18 BY MR. JAFFE: 14:19:01

19 Q. So referring to this [REDACTED], you 14:19:05

20 would agree that [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED] 14:19:20

25 MR. KIM: Objection; form. 14:19:25

1 THE WITNESS: Yes. 14:19:25

2 BY MR. JAFFE:

3 Q. Okay. You can put that aside, please. 14:19:30

4 We talked about Max Levandowski earlier. You 14:19:36

5 said he was on your team. 14:19:38

6 A. Yes. 14:19:40

7 Q. What does he do? 14:19:41

8 A. He's a mechanical engineer. He designs the 14:19:47

9 optical cavity that the lenses and the lasers and 14:19:52

10 detector boards attach to. 14:19:55

11 Q. Is what is his LiDAR experience? 14:19:58

12 A. I am not aware of any LiDAR experience prior 14:20:01

13 to working for Otto and Uber. 14:20:04

14 Q. Did he know a lot about LiDAR when he 14:20:07

15 started? 14:20:07

16 MR. KIM: Objection; form. 14:20:08

17 THE WITNESS: I don't know. 14:20:09

18 BY MR. JAFFE: 14:20:09

19 Q. He works for you; right? 14:20:10

20 A. He works for me. He worked for Otto before I 14:20:14

21 joined. 14:20:15

22 Q. When you joined, did he -- was he 14:20:18

23 sufficiently educated about how LiDAR works? 14:20:21

24 MR. KIM: Objection; form. 14:20:22

25 THE WITNESS: He seemed sufficiently educated as a 14:20:26

1 mechanical engineer. 14:20:27

2 BY MR. JAFFE: 14:20:27

3 Q. So that wasn't really my question. 14:20:29

4 A. Yes. 14:20:30

5 Q. So -- 14:20:31

6 A. I didn't quiz him on his LiDAR expertise, but 14:20:35

7 at the same time, I'll grant you that I was not aware 14:20:38

8 of any LiDAR expertise in his background prior to 14:20:42

9 Otto. 14:20:43

10 Q. Why -- well, actually, let me back up. 14:20:58

11 Do you know if Max Levandowski and Anthony 14:21:01

12 Levandowski are -- they're brothers; right? 14:21:04

13 A. That's my understanding. 14:21:05

14 Q. Do you know if they're close? 14:21:07

15 MR. KIM: Objection; form. 14:21:08

16 THE WITNESS: I don't know how close they are. 14:21:12

17 BY MR. JAFFE: 14:21:12

18 Q. Do you know about any conversations that they 14:21:13

19 had regarding LiDAR?

20 MR. KIM: Same objection. 14:21:14

21 THE WITNESS: No. 14:21:15

22 BY MR. JAFFE: 14:21:15

23 Q. And what does Max Levandowski -- excuse me -- 14:21:17

24 do at Otto today? 14:21:23

25 A. At Uber today? 14:21:25

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1 Q. (Nods head affirmatively.) 14:21:25

2 A. He continues to be the mechanical engineer 14:21:29

3 responsible for designing the optical cavity that 14:21:32

4 mounts the lenses, the laser transmit block and the 14:21:36

5 receiver boards. 14:21:37

6 Q. Did he come up with the optical cavity design 14:21:41

7 for Fuji? 14:21:42

8 A. In as much as that responsibility refers 14:21:50

9 to -- 14:21:50

10 MR. KIM: Objection; form. 14:21:53

11 THE REPORTER: I'm sorry. 14:21:53

12 THE WITNESS: Inasmuch as that responsibility 14:21:55

13 refers to designing a mechanical housing, yes. He 14:22:01

14 designed that for Fuji. 14:22:02

15 BY MR. JAFFE: 14:22:02

16 Q. Who came up with the optical cavity design 14:22:05

17 for Fuji? 14:22:06

18 MR. KIM: Objection; form. 14:22:11

19 THE WITNESS: The optical cavity design for Fuji 14:22:14

20 is related to the lens and the lens requirements. So 14:22:19

21 Gaetan plays a responsibility for that. As a 14:22:23

22 mechanical element in terms of mounting and housing 14:22:27

23 those features, those components, Max Levandowski is 14:22:29

24 responsible for that aspect. 14:22:31

25 BY MR. JAFFE: 14:22:31

1 Q. So it's Mr. Pennecot and Mr. Max Levandowski 14:22:34  
2 who came up with the optical cavity design for Fuji; 14:22:39  
3 is that fair? 14:22:40  
4 MR. KIM: Objection; form. 14:22:40  
5 THE WITNESS: My hesitancy is I'm trying to decide 14:22:51  
6 in my mind whether the transmit and receive components 14:22:54  
7 also play a part -- are considered part of the optical 14:23:00  
8 cavity. I think they fairly should be considered part  
9 of the optical cavity.  
10 So then I also add Will Treichler, Florin 14:23:05  
11 Ignatescu contributing to the design of the 14:23:09  
12 optical cavity for the Fuji, or coming up with it. 14:23:13  
13 I would claim some responsibility as well because 14:23:22  
14 I'm looking at the designs that these engineers 14:23:25  
15 are generating. I could have contributed some 14:23:28  
16 aspect as well. 14:23:30  
17 BY MR. JAFFE: 14:23:30  
18 Q. You could have or you did? 14:23:31  
19 A. I'm sure I had some influence, yes. 14:23:35  
20 Q. Going back to Max Levandowski, do you 14:23:43  
21 know -- he and Anthony, do they live together? 14:23:46  
22 A. I don't know. 14:23:48  
23 Q. Do you know how much time they spend together 14:23:52  
24 outside of the office? 14:23:53  
25 A. I don't know that. 14:23:54

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 and Otto were already talking at this time? 14:37:43

2 A. Yes. Then this would be indicative of their 14:37:48

3 discussion. 14:37:48

4 Q. Okay. So going back to page 10. 14:37:53

5 A. Yes. 14:37:54

6 Q. Do you see there's a section entitled, [REDACTED] 14:38:03

7 [REDACTED] 14:38:04

8 A. Yes. 14:38:06

9 [REDACTED] 14:38:09

10 A. No, I'm not familiar with this page. 14:38:11

11 Q. So you're -- well, you said you're not 14:38:15

12 familiar with this page. I'm referring -- 14:38:16

13 Are you familiar with [REDACTED] [REDACTED]

14 [REDACTED] 14:38:22

15 A. So I was not aware of this design, especially 14:38:41

16 with this date. No, I'm not familiar with this 14:38:45

17 design, actually. 14:38:46

18 Q. Do you know what the [REDACTED] referred to 14:38:48

19 here refers to? 14:38:49

20 A. To my knowledge, the term [REDACTED] has 14:38:55

21 been applied to be synonymous, more or less, with an 14:38:59

22 optical cavity. 14:39:00

23 Q. Do you know whether Mr. Levandowski had any 14:39:06

24 input into this [REDACTED] 14:39:09

25 A. I don't know. 14:39:09

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Q. In this concept here, you would agree that 14:39:18  
2 the PCBs are arranged along a straight-edge board? 14:39:25  
3 MR. KIM: Objection; form. 14:39:26  
4 THE WITNESS: No, that's -- this appears to be a 14:39:29  
5 schematic, and it doesn't tell me anything about the 14:39:32  
6 plan view of the board. 14:39:34  
7 BY MR. JAFFE: 14:39:34  
8 Q. Would you agree that the -- what apparently 14:39:41  
9 are the emitters are [REDACTED]? 14:39:44  
10 MR. KIM: Objection; form. 14:39:48  
11 THE WITNESS: Let me see. 14:39:49  
12 (Witness reviews document.)  
13 THE WITNESS: It's not clear if they are [REDACTED]  
14 [REDACTED]. They look [REDACTED] from what's 14:39:59  
15 clearly a simple type of PowerPoint graphic, but it's 14:40:06  
16 not clear if they say one degree native if they could 14:40:10  
17 actually achieve [REDACTED]  
18 [REDACTED] 14:40:17  
19 BY MR. JAFFE:  
20 Q. The last bullet says, [REDACTED] [REDACTED]  
21 [REDACTED] " 14:40:23  
22 Do you see that? 14:40:24  
23 A. I see that. 14:40:24  
24 Q. What does [REDACTED] refer to there? 14:40:27  
25 MR. KIM: Objection; form. 14:40:28

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 THE WITNESS: I can't be sure what was meant 14:40:31  
2 exactly; but given what I know, I would assume this 14:40:35  
3 has to do with effective [REDACTED]. 14:40:40  
4 BY MR. JAFFE: 14:40:40  
5 Q. We're talking about the Y delta again? 14:40:43  
6 MR. KIM: Objection; form. 14:40:43  
7 THE WITNESS: Not necessarily. 14:40:45  
8 BY MR. JAFFE: 14:40:45  
9 Q. You said, "Not necessarily." 14:40:47  
10 What do you mean by that? 14:40:48  
11 A. My guess would have been angular spacing. 14:40:52  
12 Q. In the top part of this page, it talks about 14:41:06  
13 [REDACTED] 14:41:11  
14 [REDACTED] 14:41:12  
15 A. I see that. 14:41:14  
16 Q. That's the [REDACTED] right? 14:41:17  
17 A. Yes. 14:41:19  
18 Q. [REDACTED] 14:41:24  
19 this is different than the Fuji design; right? 14:41:27  
20 MR. KIM: Objection; form. 14:41:32  
21 THE WITNESS: There's not a lot of detail in here; 14:41:35  
22 but it's not the Fuji design yet, that's for sure. 14:41:39  
23 BY MR. JAFFE: 14:41:39  
24 Q. And you helped start the Fuji project, and 14:41:41  
25 you're not familiar with this Plan B at all; right? 14:41:44

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1 testimony during any of the breaks today? 14:56:05

2 A. Nothing in terms of like what we said in this 14:56:10

3 testimony. 14:56:11

4 Q. What does that mean? 14:56:13

5 A. That means the legal team may have advised me 14:56:19

6 on procedural matters, general terms without 14:56:23

7 referencing the actual content of our discussion. 14:56:26

8 Q. What did they tell you? 14:56:27

9 MR. KIM: Objection. 14:56:27

10 Going to instruct you not to answer on the 14:56:31

11 grounds of attorney-client privilege. 14:56:33

12 BY MR. JAFFE: 14:56:33

13 Q. Did your legal team tell you how to testify 14:56:36

14 after these meetings? 14:56:37

15 MR. KIM: You can answer that yes or no. 14:56:39

16 THE WITNESS: Could you be clear by what you mean 14:56:41

17 by "how to testify"? 14:56:42

18 BY MR. JAFFE:

19 Q. I don't think I can be any clearer. 14:56:46

20 A. Like what to say? 14:56:47

21 Q. I'm trying to understand what the legal team 14:56:51

22 told you in terms of general terms, procedural 14:56:55

23 matters, which is what you said. 14:56:57

24 What did they tell you? 14:56:58

25 MR. KIM: Instruct you not to reveal any 14:57:00

1 privileged conversations. 14:57:11

2 THE WITNESS: Are you instructing me not to 14:57:13

3 answer? 14:57:14

4 MR. KIM: You can answer his prior question yes or 14:57:17

5 no. 14:57:17

6 THE WITNESS: If your question is, did they tell 14:57:24

7 me what to say, no. Did they tell me how to testify, 14:57:28

8 no. 14:57:29

9 BY MR. JAFFE: 14:57:29

10 Q. When you said that they told you things about 14:57:31

11 general things and procedural considerations, what 14:57:34

12 general things did they tell you? 14:57:37

13 MR. KIM: I'm going to instruct you not to answer 14:57:39

14 on the grounds of attorney-client privilege. 14:57:40

15 BY MR. JAFFE: 14:57:40

16 Q. What procedural -- what general terms about 14:57:42

17 your testimony did they tell you? 14:57:45

18 A. Let's see. We discussed how much time is 14:57:52

19 left, something called redirect. 14:57:59

20 Q. What did they talk to you about redirect? 14:58:01

21 MR. KIM: And I'm going to instruct you not to 14:58:05

22 reveal any attorney-client privileged conversations. 14:58:09

23 And I don't think you can answer that without doing 14:58:11

24 so. I'm going to instruct you not to answer. 14:58:14

25 BY MR. JAFFE: 14:58:14

1 Q. You talked about redirect on a break? Yes or 14:58:21  
2 no? 14:58:21  
3 A. Yes, we talked about the term "redirect." 14:58:24  
4 Q. And what did you talk about redirect? 14:58:28  
5 A. That is a situation where, instead of you, 14:58:33  
6 the lawyer on my side of the table is going to ask me 14:58:36  
7 questions. 14:58:36  
8 Q. And how did redirect come up in the context 14:58:39  
9 of your conversation? 14:58:40  
10 A. In the context of time remaining and that 14:58:45  
11 redirect would occur after your allotted time has 14:58:49  
12 ended, so it's going to take longer than I might 14:58:54  
13 think. 14:58:54  
14 Q. Did Uber's lawyers tell you that they were 14:58:58  
15 going to do redirect questions? 14:59:00  
16 A. Yes. 14:59:02  
17 Q. And did they tell you what those questions 14:59:04  
18 were going to be about? 14:59:06  
19 A. No. 14:59:07  
20 Q. Did you talk at all about what sort of 14:59:11  
21 redirect would happen? 14:59:13  
22 A. No. 14:59:16  
23 Q. What did you talk about about redirect? 14:59:19  
24 A. That they will ask me questions just like you 14:59:24  
25 ask me questions and that it's going to take longer 14:59:27

1       than the hour, approximately, that we have remaining,       14:59:30  
2       so not to expect it to be over at that time.       14:59:34  
3       Q.     What else, in general terms, did you and your       14:59:36  
4       lawyers talk about on the breaks?       14:59:38  
5       MR. KIM: I'm going to advise you not to reveal       14:59:46  
6       any attorney-client privileged communications.       14:59:49  
7       THE WITNESS: So I'm not a lawyer. I don't know       14:59:55  
8       what is considered attorney-client privilege and what       14:59:58  
9       wouldn't be in that context of conversations, so I       15:00:01  
10       need to be careful not to answer and disclose       15:00:03  
11       something I'm not supposed to say.       15:00:06  
12       MR. KIM: Do you need to consult with me about a       15:00:09  
13       privilege issue?       15:00:09  
14       THE WITNESS: Yes, that would help.       15:00:12  
15       MR. KIM: Can we go off the record so he can       15:00:15  
16       consult with me on a privilege issue before he answers       15:00:18  
17       any further questions about what we discussed?       15:00:20  
18       MR. JAFFE: I'll withdraw the question and I'll       15:00:22  
19       ask a different question.       15:00:23  
20       BY MR. JAFFE:       15:00:23  
21       Q.     Tell me the substance of your private       15:00:26  
22       conferences -- private conferences during the break       15:00:28  
23       that you had with Uber's lawyers, all of it.       15:00:32  
24       MR. KIM: I'm going to object on the grounds of       15:00:36  
25       privilege.       15:00:37

1 MR. JAFFE: Are you instructing him not to answer? 15:00:41  
2 MR. KIM: Instruct him not to answer. 15:00:42  
3 MR. JAFFE: Okay. I think you know that's 15:00:47  
4 directly contrary to Judge Alsup's order. 15:00:50  
5 MR. KIM: Can you clarify that. 15:00:53  
6 MR. JAFFE: Judge Alsup's order says no private 15:00:56  
7 conferences after testimony begins. 15:00:58  
8 MR. KIM: He's testified that we haven't had any 15:01:01  
9 private conferences about his testimony. 15:01:03  
10 MR. JAFFE: The record speaks for itself. You 15:01:06  
11 instructed him not to answer. I'm going to move on. 15:01:09  
12 This is going to be Exhibit 158. It's a 15:01:15  
13 document entitled UBER00012240. 15:01:19  
14 (Plaintiff's Exhibit 158 was marked.) 15:01:37  
15 BY MR. JAFFE: 15:01:37  
16 Q. This is an e-mail from earlier in March of 15:01:40  
17 this year; right -- excuse me, April. 15:01:47  
18 A. Thank you. Yes. 15:01:48  
19 Q. And on this e-mail is yourself, Anthony 15:01:53  
20 Levandowski, Claire Delaunay and Eric Meyhofer; right? 15:01:57  
21 A. Yes. 15:01:59  
22 Q. What is Claire Delaunay's role at Uber? 15:02:06  
23 A. She's a software engineer or software 15:02:08  
24 engineering manager. 15:02:10  
25 Q. And there's -- on the "To" line, it says, 15:02:13

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## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 [REDACTED] 15:02:15

2 Do you see that? 15:02:17

3 A. I see that. 15:02:19

4 Q. Why does it say [REDACTED] there? 15:02:23

5 A. I don't know. 15:02:23

6 Q. And you said, [REDACTED] -- so referring to the 15:02:28

7 substance of the e-mail that you wrote, you said, 15:02:30

8 [REDACTED] 15:02:32

9 What are you referring to? 15:02:33

10 A. I referred to this web link. I can't 15:02:42

11 remember right now what I was looking at. [REDACTED] 15:02:47

12 [REDACTED]. 15:02:54

13 This could be a LiDAR sensor, but clicking on 15:02:59

14 the web link would make it very clear what this was. 15:03:03

15 Q. [REDACTED] that's Anthony Levandowski's 15:03:20

16 address; right? 15:03:20

17 A. I believe it is, yes. 15:03:20

18 Q. So someone had in their address book Anthony 15:03:25

19 Levandowski's e-mail address, but the name was just 15:03:29

20 [REDACTED] 15:03:31

21 A. Apparently. 15:03:31

22 Q. Did you notice that when you received this 15:03:36

23 e-mail? 15:03:36

24 A. No, I did not. 15:03:38

25 Q. Are you aware of whether Mr. Levandowski 15:03:40

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 consulted for Uber? 15:03:45

2 A. No. Consulted, no. 15:03:48

3 Q. Okay. You can put that aside. 15:04:04

4 This has been previously marked as Exhibit 15:04:18

5 60. So if you can go to 85 -- oh, this is the wrong 15:04:37

6 doc. 15:04:37

7 Going back in time, there's an e-mail from -- 15:04:52

8 Scott Boehmke wrote, [REDACTED] 15:04:56

9 [REDACTED]" 15:05:00

10 Do you see that? It's on the last page. 15:05:03

11 (Witness reviews document.) 15:05:14

12 A. Okay. I see that. 15:05:16

13 Q. Do you know what the "doc" being referred to 15:05:19

14 here is? 15:05:20

15 MR. KIM: Objection; form. 15:05:26

16 THE WITNESS: No. I don't know what the doc was. 15:05:35

17 BY MR. JAFFE: 15:05:35

18 Q. And then in the next e-mail in time, you were 15:05:47

19 added to the thread. 15:05:54

20 Do you see that? 15:05:55

21 A. Yes. 15:05:58

22 Q. Do you remember being added to this e-mail 15:06:01

23 thread? 15:06:02

24 A. Remember? This dates back pretty far. I 15:06:09

25 don't remember. About a year ago. 15:06:11

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Q. But at this time, immediately when you were 15:06:20  
2 involved, Mr. Boehmke and Mr. Levandowski were having 15:06:26  
3 LiDAR-related discussions; right? 15:06:31  
4 MR. KIM: Objection; form. 15:06:38  
5 THE WITNESS: It's not -- it's not clear, when it 15:06:40  
6 says, [REDACTED] [REDACTED]  
7 [REDACTED] meant Scott and Anthony or Scott and somebody 15:06:49  
8 else, so I don't know. 15:06:50  
9 BY MR. JAFFE: 15:06:50  
10 Q. Do you think that's ambiguous? 15:06:52  
11 A. I think that's ambiguous. 15:06:54  
12 MR. JAFFE: You can set that aside. 15:07:11  
13 We're on 158? 15:07:13  
14 THE REPORTER: 159. 15:07:15  
15 MR. JAFFE: Get it right one of these times. 15:07:18  
16 (Plaintiff's Exhibit 159 was marked.) 15:07:35  
17 BY MR. JAFFE: 15:07:35  
18 Q. In June of 2016, you were working at Otto; 15:07:39  
19 right? 15:07:39  
20 A. Yes. 15:07:41  
21 Q. And do you see, in the second e-mail, there's 15:07:43  
22 [REDACTED] [sic]? 15:07:47  
23 Do you see that? 15:07:50  
24 A. Yes. 15:07:50  
25 Q. What is that e-mail list? 15:07:54

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## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1	list or not?	15:08:57
2	A. I don't recall if he was on the list or not.	15:09:00
3	Q. Okay. So sitting here today, you have no	15:09:02
4	personal knowledge whether Mr. Levandowski was on the	15:09:04
5	laser-dev e-mail list; right?	15:09:07
6	A. Sitting here right now, I don't remember if	15:09:10
7	he was on the list.	15:09:11
8	Q. Who else was on that list at this time that	15:09:14
9	you remember?	15:09:15
10	A. I would assume it was the other people	15:09:19
11	developing the LiDAR sensors.	15:09:21
12	Q. And who are those people?	15:09:23
13	A. It would be -- to my expectation, people like	15:09:28
14	Gaetan, Dan Gruver, Daniel Ratner. I don't know if	15:09:38
15	Radu was part of the company at the time. Mike	15:09:55
16	Karasoff. Probably Matt Palomar, Benjamin Becker.	15:10:00
17	That's all I can remember right now. Certainly also	15:10:22
18	could have involved Anthony Levandowski for	15:10:25
19	informative purposes.	15:10:27
20	Q. What about Max?	15:10:28
21	A. I'm sorry. Of course, Max Levandowski as	15:10:30
22	well. Who else am I forgetting? Refer back to my	15:10:41
23	list.	15:10:42
24	Q. For the record, you're looking at Exhibit	15:10:45
25	153; right?	15:10:46

1           Where did the idea to do [REDACTED] [REDACTED]  
2           [REDACTED] come from in the Fuji mid-range 15:24:56  
3           transmit board design? 15:24:58  
4           MR. KIM: Objection; form. 15:25:03  
5           THE WITNESS: I think it's a mischaracterization 15:25:04  
6           to call it -- the vertical spacing as something that 15:25:08  
7           had an idea -- that had an origin as an idea. The 15:25:12  
8           fact that [REDACTED] [REDACTED]  
9           [REDACTED] is a side effect of the optics 15:25:21  
10           in the optical cavity. 15:25:24  
11           BY MR. JAFFE: 15:25:24  
12           Q. So you can't tell me where it came from, who 15:25:26  
13           came up with the idea? 15:25:28  
14           A. I'm trying to explain -- I don't think 15:25:31  
15           anybody had this idea to [REDACTED] [REDACTED]  
16           [REDACTED] on the laser board. 15:25:40  
17           I believe that was a side effect that was unavoidable 15:25:46  
18           when you take a set of vertical angles, especially if 15:25:51  
19           they're nearly or equivalently spaced in terms of 15:25:56  
20           angle, and project those onto a curved focal surface. 15:26:01  
21           Q. You said it's unavoidable. 15:26:03  
22           You worked at Velodyne; right? 15:26:05  
23           A. Yes. 15:26:05  
24           Q. You didn't do [REDACTED] at 15:26:09  
25           Velodyne; right? 15:26:11

1 MR. KIM: Objection; form. 15:26:12

2 BY MR. JAFFE: 15:26:12

3 Q. In terms of the X and Y positions of the 15:26:15

4 diodes? 15:26:15

5 A. I'm not aware that they were [REDACTED] [REDACTED]

6 [REDACTED], as a matter of fact. 15:26:20

7 Q. You don't know? 15:26:22

8 A. I -- actually, if I had to guess, because it 15:26:25

9 was never something we directly measured or 15:26:27

10 considered, they probably are [REDACTED]. 15:26:31

11 Q. And why do you say that? 15:26:34

12 A. [REDACTED]

13 [REDACTED] [REDACTED] 15:26:46

14 [REDACTED] 15:26:51

15 [REDACTED] 15:26:56

16 [REDACTED] [REDACTED] [REDACTED] 15:27:00

17 [REDACTED] 15:27:00

18 Q. What do you mean, it's [REDACTED]? 15:27:02

19 A. I would have to do the math or do a CAD 15:27:08

20 simulation, but I fully expect [REDACTED] 15:27:13

21 [REDACTED] 15:27:19

22 [REDACTED] 15:27:22

23 [REDACTED] 15:27:24

24 Q. Okay. You worked at Velodyne; right? 15:27:28

25 A. Yes. 15:27:28

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 Q. And you worked on LiDAR at Velodyne? 15:27:32

2 A. Yes. 15:27:32

3 [REDACTED] [REDACTED]

4 [REDACTED] 15:27:37

5 A. [REDACTED] 15:27:39

6 Q. Do you know whether [REDACTED] [REDACTED]

7 [REDACTED]? 15:27:43

8 [REDACTED] 15:27:48

9 [REDACTED] [REDACTED] [REDACTED]

10 [REDACTED] [REDACTED] [REDACTED]

11 [REDACTED] 15:27:57

12 Q. So I want to again go back to this idea of 15:28:20

13 where did the idea to do the vertical spacing design 15:28:23

14 in Fuji come from? You've said -- you've mentioned 15:28:26

15 the things -- the drivers, but I haven't heard who 15:28:29

16 came up with the idea, where it came from. 15:28:32

17 A. Again, you're referring, I believe, to a 15:28:34

18 linear vertical -- what we call delta Y; is that 15:28:37

19 correct? 15:28:38

20 Q. Yes. 15:28:39

21 A. I have to give you the same answer. It was 15:28:43

22 not a concept that drove the design. There was nobody 15:28:48

23 coming up with the idea to do that. The idea for the 15:28:54

24 vertical angles I would attribute to Scott Boehmke. 15:28:58

25 The lens design I would attribute to Gaetan Pennecot. 15:29:01

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 So what you end up with on the board at that point is 15:29:06  
2 just derived from those pieces of information. 15:29:10  
3 Q. So talking about the angles, you said when 15:29:13  
4 you were at Velodyne, you did constant angles. 15:29:17  
5 A. Yes. 15:29:17  
6 Q. Why didn't you want to get [REDACTED] [REDACTED]  
7 [REDACTED] when you were working at 15:29:26  
8 Velodyne? 15:29:27  
9 A. I don't know. 15:29:28  
10 Q. You guys didn't come up with that? You 15:29:31  
11 didn't think of that idea? 15:29:33  
12 A. I don't think so. I mean, I would -- at that 15:29:40  
13 point, [REDACTED] had a very strong influence on this 15:29:43  
14 is what your LiDAR is going to be, this is the angle 15:29:46  
15 spacing. So it's not something that I had ever 15:29:49  
16 thought of. 15:29:50  
17 Q. It not something that you guys considered, 15:29:54  
18 which is you want [REDACTED] as you 15:29:59  
19 go down the road? 15:30:00  
20 A. [REDACTED]? 15:30:00  
21 Q. Yes. 15:30:01  
22 A. That was the design that Velodyne ended up 15:30:04  
23 with -- 15:30:05  
24 Q. Sorry. 15:30:05  
25 A. -- still 32.

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 THE WITNESS: [REDACTED] [REDACTED]  
2 [REDACTED] [REDACTED]  
3 [REDACTED] [REDACTED]  
4 BY MR. JAFFE: 15:39:47  
5 [REDACTED] [REDACTED] [REDACTED]  
6 [REDACTED] [REDACTED]  
7 [REDACTED] [REDACTED]  
8 MR. KIM: Objection; form. 15:39:56  
9 THE WITNESS: No, I'm sorry. Could you be more 15:40:04  
10 specific in your question. I'm confused. 15:40:07  
11 BY MR. JAFFE: 15:40:07  
12 Q. Because I'm short on time, I'll just skip 15:40:10  
13 that.  
14 Here in this e-mail, these are early 905 15:40:13  
15 nanometer discussions. 15:40:15  
16 A. Yes.  
17 Q. And you wrote, [REDACTED] [REDACTED] [REDACTED]  
18 [REDACTED] [REDACTED] [REDACTED]  
19 [REDACTED] 15:40:23  
20 Do you see that? 15:40:25  
21 A. Yes. 15:40:25  
22 Q. So at the time of this e-mail, October 28th, 15:40:30  
23 you had the idea of [REDACTED]? 15:40:35  
24 A. Yes. 15:40:35  
25 Q. So at this point, in October, you didn't 15:40:38

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1 actually have the idea of [REDACTED] [REDACTED]  
[REDACTED] [REDACTED]? 15:40:44  
3 A. True. 15:40:45  
4 Q. So this is not evidence of -- this e-mail is 15:40:50  
5 not indicative of you coming up with the [REDACTED] [REDACTED]  
[REDACTED]; right? 15:41:00  
7 MR. KIM: Objection; form. 15:41:01  
8 THE WITNESS: This is not indicative of the -- or 15:41:04  
9 this is not evidential to the [REDACTED] [REDACTED]  
[REDACTED]. 15:41:12  
11 BY MR. JAFFE: 15:41:12  
12 Q. And what you were thinking on October 26th 15:41:14  
13 [sic] is [REDACTED]; right? 15:41:18  
14 A. Yes, on October 28th. 15:41:20  
15 Q. Okay.  
16 MR. KIM: Jordan, are you wrapping up? 15:41:40  
17 MR. JAFFE: I only have a few more minutes, so I 15:41:43  
18 think I'm wrapping up. 15:41:45  
19 MR. KIM: I think we've got one. 15:41:47  
20 BY MR. JAFFE: 15:41:47  
21 Q. What documents are you aware of that would 15:42:04  
22 show Anthony -- all of Anthony Levandowski's input 15:42:08  
23 into Uber and Otto's LiDAR designs? 15:42:12  
24 MR. KIM: Objection; form. 15:42:14  
25 THE WITNESS: I'm not aware of a list of documents 15:42:17

1 or a source for documents to go to to document all of 15:42:20  
2 his influence. 15:42:21  
3 BY MR. JAFFE: 15:42:21  
4 Q. How would you find out about how 15:42:25  
5 Mr. Levandowski has influenced LiDAR design at Uber 15:42:30  
6 and Otto? 15:42:31  
7 MR. KIM: Objection; form. 15:42:41  
8 THE WITNESS: That's difficult. 15:42:42  
9 BY MR. JAFFE: 15:42:42  
10 Q. Why? 15:42:44  
11 A. When you're looking for all of something and 15:42:49  
12 you need to miss nothing, that's not an easy problem 15:42:53  
13 to solve. If you look at all the possible sources of 15:42:58  
14 influence, I'm not sure they would all be documented. 15:43:01  
15 Q. How would you go about trying to find out as 15:43:04  
16 much as you could about how Mr. Levandowski has had 15:43:08  
17 input into Uber and Otto's LiDAR designs? 15:43:13  
18 MR. KIM: Objection; form. 15:43:16  
19 THE WITNESS: I suppose I would talk to the 15:43:18  
20 various engineers that had LiDAR responsibilities. 15:43:21  
21 BY MR. JAFFE: 15:43:21  
22 Q. Who? 15:43:22  
23 A. Shall we pick up -- 15:43:31  
24 Q. Would you talk to everyone on this list? Is 15:43:32  
25 that the idea? 15:43:33

25 Q. Is there any -- is there any other source of 15:44:31

1 documents that you would look at or data, anything? 15:44:34  
2 MR. KIM: Objection; form. 15:44:35  
3 THE WITNESS: I don't know. I might look for 15:44:48  
4 Google docs with his authorship. 15:44:51  
5 BY MR. JAFFE: 15:44:51  
6 Q. Anything else? 15:44:55  
7 A. No. 15:44:56  
8 Q. Okay. 15:44:56  
9 MR. JAFFE: Well, I think I have run out of time. 15:45:01  
10 MR. KIM: Okay. 15:45:06  
11 THE REPORTER: Do you want this as 161? 15:45:20  
12 MR. KIM: Yes.  
13 THE REPORTER: Next number? Okay.  
14 MR. JAFFE: I'm going to object --  
15 THE REPORTER: Hang on. Let me just write this.  
16 MR. KIM: Oh. 1061.  
17 THE REPORTER: 161?  
18 MR. KIM: You know, I think we're alternating --  
19 MR. JAFFE: We have different blocks of exhibits. 15:45:31  
20 So his exhibit numbers, they start at 1000; ours start 15:45:35  
21 at zero. So I don't know what number you're at. 15:45:36  
22 MR. KIM: Actually, can we start at 1060. 15:45:39  
23 (Defendants' Exhibit 1060 was marked.) 15:46:05  
24 REDIRECT EXAMINATION  
25 BY MR. KIM: 15:46:05

1 THE WITNESS: I wasn't sure. I don't recall the 17:28:43  
2 strict definition of [REDACTED] [REDACTED]  
3 [REDACTED]. 17:28:52  
4 BY MR. JAFFE: 17:28:52  
5 Q. I see. So if we exclude zero change, if 17:28:55  
6 something is [REDACTED] [REDACTED]  
7 [REDACTED]; right? 17:29:01  
8 MR. KIM: Objection; form. 17:29:04  
9 THE WITNESS: I believe so, yes. 17:29:07  
10 BY MR. JAFFE: 17:29:07  
11 Q. And if we go back and we look at -- I don't 17:29:12  
12 have the number in front of me. It's the one where 17:29:14  
13 you pencilled out all the changes. 17:29:16  
14 A. The changes. 17:29:18  
15 Q. The changes, yeah. 17:29:18  
16 A. Let's see, this one; right? 17:29:22  
17 Q. Not that one. The one that looks like this 17:29:25  
18 (indicating). The Fuji data. 17:29:28  
19 A. Is that not the one I wrote for you? 17:29:31  
20 Q. Yes. It should be over there in that pile. 17:29:36  
21 It's just going to be one sheet of paper. 17:29:40  
22 MR. KIM: Thank you. 17:29:42  
23 (Witness reviews documents.) 17:29:52  
24 THE WITNESS: This one? 17:29:53  
25 BY MR. JAFFE: 17:29:53

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1 Q. That's it. 17:29:54  
2 A. Okay. 17:29:55  
3 Q. Do you remember when we were talking about 17:29:56  
4 the delta Y column? 17:29:58  
5 A. Yes. 17:29:58  
6 Q. Does the delta Y column -- I guess we'll say, 17:30:03  
7 [REDACTED]? 17:30:10  
8 MR. KIM: Objection; form. 17:30:14  
9 THE WITNESS: Yes, it appears to [REDACTED] [REDACTED]  
10 [REDACTED] 17:30:17  
11 BY MR. JAFFE: 17:30:17  
12 Q. So the difference between [REDACTED] [REDACTED]  
13 [REDACTED] is immaterial to what we were talking 17:30:23  
14 about in Exhibit 156; right? 17:30:25  
15 MR. KIM: Objection; form. 17:30:26  
16 THE WITNESS: I can say that the delta Y column 17:30:31  
17 appears to be [REDACTED] [REDACTED]  
18 [REDACTED] yes. 17:30:35  
19 BY MR. JAFFE: 17:30:35  
20 Q. You talked about [REDACTED] with your 17:30:38  
21 counsel. 17:30:39  
22 Do you remember that? 17:30:40  
23 A. Yes. 17:30:40  
24 Q. And you said that you reuse some of the parts 17:30:42  
25 from [REDACTED] in the Fuji design; is that right? 17:30:45

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1 THE WITNESS: No. 17:35:55

2 BY MR. JAFFE:

3 Q. So Spider, you're never going to use it 17:36:02

4 again; right? 17:36:03

5 A. I don't have any intention of reusing it 17:36:05

6 again right now. 17:36:06

7 Q. That's not my question. My question is, Uber 17:36:09

8 is never going to use Spider; right? 17:36:12

9 A. You're asking if the company is going to do 17:36:18

10 something in the future? 17:36:20

11 Q. That's right. 17:36:20

12 A. I don't know. 17:36:21

13 Q. So sitting here today, you can't tell me 17:36:24

14 whether Uber is going to use Spider in the future? 17:36:27

15 A. No. I can only tell you my intentions right 17:36:31

16 now. 17:36:31

17 Q. All right. You mentioned Fuji. Oh, I'm 17:36:47

18 sorry, going back to Spider. 17:36:50

19 Why save the parts if you're never going to 17:36:53

20 use it? 17:36:54

21 A. That's a good question. 17:36:57

22 Q. Why didn't you throw it away? 17:37:00

23 A. I don't know if we've thrown anything away. 17:37:03

24 I don't know. It should have, could have easily been 17:37:05

25 recycled, yeah. 17:37:07

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1 Q. So you don't know why you kept it? 17:37:10

2 A. Just because we didn't throw it away, as far 17:37:13

3 as I know. 17:37:14

4 Q. So sitting here today, again, you can't tell 17:37:19

5 me why you kept the Spider; right? 17:37:21

6 A. Yes. 17:37:26

7 Q. Okay. I want to ask about your supplemental 17:37:42

8 declaration that you went into detail with with your 17:37:46

9 counsel. And let's start with page 11. And there's 17:38:07

10 Figures 8A and 8B here. 17:38:09

11 Do you see that? 17:38:10

12 A. I see that. 17:38:11

13 Q. And during your testimony by your counsel, 17:38:13

14 you said -- you referred to these [REDACTED], and you 17:38:17

15 said whoever did these letters. 17:38:21

16 A. Um-hum.

17 Q. You didn't prepare 8A and 8B, did you? 17:38:28

18 A. No. 17:38:28

19 Q. Who prepared 8A and 8B? 17:38:31

20 A. Counsel. 17:38:33

21 Q. Who? 17:38:34

22 A. Jackie Choy [sic], I believe. 17:38:39

23 Q. So Uber's lawyers prepared this and sent this 17:38:43

24 to you; is that right? 17:38:44

25 A. Yes. 17:38:45

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1 Q. And you signed it without actually checking 17:38:47  
2 it was accurate? 17:38:49  
3 A. Whoa. I looked at these numbers. 17:38:52  
4 Q. But you didn't check what you did today 17:38:54  
5 before you signed this declaration, did you? 17:38:59  
6 A. What do you mean? Identifying, double 17:39:02  
7 checking the [REDACTED] 17:39:04  
8 Q. Yes. 17:39:04  
9 A. I did check that. 17:39:06  
10 Q. So why today did you need to check it again? 17:39:09  
11 A. I like to be careful. 17:39:11  
12 Q. You like to be careful? 17:39:12  
13 A. Yeah. I want to be sure we can show the [REDACTED] [REDACTED]  
14 [REDACTED], that they matched. 17:39:19  
15 Q. Did you know when you signed your declaration 17:39:22  
16 whether these actually matched every single angle and 17:39:26  
17 every single board? 17:39:27  
18 A. Yes, I believe I did. 17:39:28  
19 Q. What do you mean you believe you did? 17:39:31  
20 A. To my recollection, I checked [REDACTED] [REDACTED]  
21 [REDACTED] And I checked the 17:39:42  
22 initial [REDACTED] and knew that they would follow the 17:39:46  
23 same pattern so I didn't check every single angle. 17:39:50  
24 Q. How many of these did you actually check 17:39:52  
25 yourself before you signed your declaration? 17:39:55

## HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1 A. I remember at least checking the initial [REDACTED] [REDACTED]  
[REDACTED] [REDACTED] 17:40:04

3 Q. So you checked about six out of the 64; is 17:40:08  
4 that fair? 17:40:09

5 A. Yeah. 17:40:09

6 Q. And the rest are purely from counsel; you're 17:40:12  
7 just relying on them? 17:40:14

8 A. Not exactly. 17:40:16

9 Q. You didn't check. 17:40:19  
10 How did you know it was accurate? 17:40:21

11 A. How would the pattern change? 17:40:24

12 Q. I don't know. It's your declaration. 17:40:26

13 A. I understand. From my understanding, the 17:40:30  
14 pattern is consistent in the letters. So once you 17:40:35  
15 start the pattern properly, it's going to finish out 17:40:39  
16 properly. 17:40:40

17 Q. Let's go to the next page, page 12. 17:40:42  
18 Who prepared this table? 17:40:44

19 A. Counsel for Uber. 17:40:51

20 Q. And you had to double check it here at your 17:40:54  
21 deposition; you didn't know whether it was accurate 17:40:55  
22 when you signed it, did you? 17:40:57

23 MR. KIM: Objection; form. 17:40:58

24 THE WITNESS: I believe I checked that before as 17:41:00  
25 well. 17:41:01

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1 BY MR. JAFFE: 17:41:01

2 Q. You did? How many? 17:41:03

3 A. I don't recall. Some. 17:41:14

4 Q. How many? 17:41:16

5 A. I would have checked first sets of angles. I 17:41:25

6 don't know. 17:41:25

7 Q. I'm not asking what you would have done. I'm 17:41:28

8 asking what you did. 17:41:29

9 A. I don't remember what I did. 17:41:30

10 Q. You don't remember checking any of these, do 17:41:33

11 you? 17:41:33

12 MR. KIM: Objection; form. 17:41:34

13 THE WITNESS: That's not true. 17:41:35

14 BY MR. JAFFE: 17:41:35

15 Q. So you checked one? 17:41:36

16 MR. KIM: Objection; form. 17:41:38

17 THE WITNESS: I specifically was checking those 17:41:40

18 that had the [REDACTED] degree, and I was specifically 17:41:44

19 checking those that began the pattern as well. 17:41:47

20 BY MR. JAFFE: 17:41:47

21 Q. So you checked probably, what, five or six? 17:41:50

22 A. Should be at least six, was at least six. 17:41:54

23 Q. At least six. You don't remember checking 17:41:56

24 anymore on this one? 17:41:59

25 A. I don't remember checking more. 17:42:00

1 Q. Let's go to the next page. There's another 17:42:03  
2 chart, page 13. 17:42:04  
3 Who wrote this chart? 17:42:06  
4 A. Same person who prepared the previous chart. 17:42:10  
5 Q. And how many angles did you check in this 17:42:14  
6 one? 17:42:15  
7 A. Again, I would -- I believe I checked maybe 17:42:20  
8 six. 17:42:20  
9 Q. And how did you know that the data that 17:42:23  
10 Uber's lawyers were relying on was accurate? 17:42:27  
11 A. I would say there's a certain level of 17:42:40  
12 expectation of accuracy when you're pulling data out 17:42:45  
13 of a spreadsheet into another spreadsheet. 17:42:47  
14 Q. You mean you were relying on Uber's lawyers 17:42:50  
15 to give you accurate data? 17:42:52  
16 MR. KIM: Objection; form. 17:42:53  
17 THE WITNESS: I was relying on Uber's lawyers to 17:42:58  
18 do the obvious simple thing, cut and paste from a 17:43:01  
19 spreadsheet, and not inject an errors by manually 17:43:05  
20 changing numbers. 17:43:07  
21 BY MR. JAFFE: 17:43:07  
22 Q. You see it says "Current" here? 17:43:09  
23 A. Yes. 17:43:09  
24 Q. Where did Uber's lawyers get the numbers that 17:43:13  
25 go in the "Current" column? 17:43:15

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1           A.     What is this document called? This would be       17:43:24

2     from Exhibit 155.    17:43:26

4           A.     Because she said so.   17:43:30

7 MR. KIM: I'm going to object on grounds of 17:43:41

8 privilege and instruct you not to answer that. 17:43:45

9 BY MR. JAFFE: 17:43:45

14	A. I would inspect Exhibit 155 in the theta	17:44:14
15	column for these boards to find the angles that match.	17:44:22

16 THE REPORTER: To find the angles that . . . 17:44:22

17 MR. JAFFE: Excuse me.

19 BY MR. JAFFE:

22	A. So as I said, I compared some number, maybe	17:44:34
23	six, of the angles under "Current" against the angles	17:44:41
24	listed under the theta column in Exhibit 155.	17:44:46

25	0. Where do the numbers from the "Current"	17:44:48
----	--	----------

1 column come from in your declaration? 17:44:51

2 A. They came from the spreadsheet that we're 17:44:59

3 printing out and calling Exhibit 155. 17:45:02

4 Q. And how do you know that? How did you know 17:45:05

5 that at the time? 17:45:05

6 A. How did I know to look there as a source? 17:45:09

7 Q. No. How did you know that the source of 17:45:11

8 these numbers were from that spreadsheet before you 17:45:14

9 signed your declaration? 17:45:16

10 A. So in the process of developing this 17:45:20

11 document, I was in communication with Uber's counsel. 17:45:24

12 Q. So Uber's lawyers told you that these numbers 17:45:29

13 come from the "Current" number and they sent them to 17:45:32

14 you and that's the basis of your understanding that 17:45:34

15 these numbers actually are current? 17:45:36

16 MR. KIM: I'm going to object on the grounds of 17:45:39

17 privilege and instruct you not to answer the question 17:45:42

18 to the extent it asks what Uber's lawyers told you. 17:45:48

19 THE WITNESS: I would refer to my discussion with 17:45:50

20 Uber's lawyer for the source of the information that 17:45:55

21 allows me to go back and check myself at least some of 17:45:59

22 the numbers with the belief that the other numbers in 17:46:02

23 between for every logical reason should be the correct 17:46:06

24 numbers. 17:46:07

25 BY MR. JAFFE: 17:46:07

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1 Q. But you didn't check that before you signed 17:46:09  
2 your declaration; right? 17:46:11  
3 MR. KIM: Objection; form. 17:46:12  
4 THE WITNESS: I did not recall checking all 32 17:46:20  
5 angles in this table, or 64 as the case may be. 17:46:24  
6 BY MR. JAFFE: 17:46:24  
7 Q. So you couldn't -- at the time you signed 17:46:28  
8 this declaration, you couldn't say that what's in here 17:46:35  
9 actually does represent all the current angles because 17:46:39  
10 you didn't check each one? 17:46:41  
11 MR. KIM: Objection; form. 17:46:42  
12 THE WITNESS: I really believe without checking 17:46:44  
13 every single one, I could have a very high reasonable 17:46:48  
14 confidence that they are correct. 17:46:50  
15 BY MR. JAFFE: 17:46:50  
16 Q. Because you believe Uber's lawyers? 17:46:52  
17 MR. KIM: Objection; form. 17:46:55  
18 THE WITNESS: Because I checked the beginning and 17:46:57  
19 the end and have every reason to believe that a cut 17:47:02  
20 and paste from one spreadsheet to another would be 17:47:05  
21 without error. 17:47:05  
22 BY MR. JAFFE: 17:47:05  
23 Q. But what spreadsheet did it come from? 17:47:09  
24 A. The spreadsheet that's printed out in Exhibit 17:47:13  
25 155. 17:47:13

1 Q. How do you know that? 17:47:14

2 A. By talking to the lawyer. 17:47:16

3 Q. So Uber's lawyer told you that he or she cut 17:47:20

4 and paste out of a spreadsheet and put it into this 17:47:23

5 chart? 17:47:23

6 MR. KIM: Objection; calls for privileged 17:47:26

7 information. Instruct you not to answer to the extent 17:47:29

8 it's asking you what Uber's lawyers told you. 17:47:31

9 MR. JAFFE: This is waived. 17:47:33

10 I mean, the only basis for him to say that this is 17:47:35

11 current is what a lawyer told him, so that's not a 17:47:39

12 proper privilege instruction. 17:47:40

13 MR. KIM: He's already told you that it's based on 17:47:42

14 communications with his lawyers. You're not entitled 17:47:45

15 to know exactly what his lawyers told him. 17:47:47

16 MR. JAFFE: I'm entitled to know exactly that. 17:47:49

17 MR. KIM: Disagree. 17:47:50

18 BY MR. JAFFE: 17:47:50

19 Q. Mr. Haslim, what did Uber's lawyers tell you 17:47:56

20 was the source of the data in the "Current" column? 17:47:59

21 MR. KIM: Same objection with instruction not to 17:48:01

22 answer. 17:48:02

23 You can answer that question generally if 17:48:08

24 you can without revealing the exact -- the 17:48:12

25 specific communications that you've had with the 17:48:14

1 lawyer. But I think you've already done that. 17:48:17

2 Can you rephrase the question to avoid asking 17:48:24

3 with him what Uber's lawyers told him? 17:48:26

4 BY MR. JAFFE: 17:48:26

5 Q. I'm asking him, what is the basis for his 17:48:30

6 knowledge, to the extent that he has any, about where 17:48:33

7 the data in the "Current" column in your declaration 17:48:36

8 came from? 17:48:38

9 A. I'll have to say my knowledge of where the 17:48:42

10 data in the "Current" column came from would come from 17:48:47

11 inspecting where I believed it came from and finding a 17:48:51

12 reasonable match from some number of channels that 17:48:55

13 begin the pattern and end the pattern. 17:48:57

14 Q. How did you know to look in that document? 17:49:01

15 A. Discussion with counsel. 17:49:05

16 Q. Okay. So let me start again. What was your 17:49:07

17 basis for understanding that what's in the "Current" 17:49:10

18 column actually reflects anything in Fuji? 17:49:13

19 A. Again, my basis for understanding what was 17:49:18

20 reflected in the "Current" column reflects what was 17:49:21

21 actually built in Fuji was to compare some subset of 17:49:26

22 the numbers at least to the angles in a document that 17:49:29

23 I know was used to build Fuji. 17:49:33

24 Q. So again, for the chart on page 13 here, you 17:49:37

25 didn't prepare that chart; right? 17:49:39

1 MR. KIM: Objection; form. 17:49:42

2 THE WITNESS: I did not prepare this spreadsheet 17:49:44

3 chart.

4 BY MR. JAFFE: 17:49:45

5 Q. It came to you fully formed with the current

6 column and the November 16th column already populated;

7 right?

8 A. Yes. 17:49:52

9 Q. And you only checked a couple of the angles; 17:49:55

10 right? 17:49:55

11 A. I checked more than a couple, but I checked a 17:50:00

12 subset of the angles. 17:50:01

13 Q. And what about the November 16th one, how 17:50:04

14 many of those did you check? 17:50:05

15 A. I would have -- I don't remember exactly how 17:50:09

16 many I checked. 17:50:09

17 Q. Do you remember checking any? 17:50:11

18 A. Yes. 17:50:12

19 Q. More than one? 17:50:15

20 A. Yeah. It would have been more than one, but 17:50:17

21 I don't remember exactly how many. 17:50:19

22 Q. What else in your declaration did you rely on 17:50:23

23 representations from counsel about? 17:50:25

24 A. Annotations in Figure 2B. 17:50:45

25 Q. That's relied on by counsel? 17:50:48

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1 A. Counsel created the annotations. I looked at 17:50:52  
2 it, thought it looked correct. 17:50:55

3 Q. What about -- let's go to page 4. 17:51:02

4 A. Okay. 17:51:03

5 Q. Do you see there's some large footnotes 17:51:06  
6 there? 17:51:07

7 A. Yes. 17:51:07

8 Q. Who provided those references? 17:51:09

9 A. I did. 17:51:10

10 Q. And where did you find them? 17:51:12

11 A. On the web. 17:51:13

12 Q. So you went out and found each of those? 17:51:16

13 A. Yes. 17:51:16

14 Q. And the iXBlue one that you're referring to? 17:51:20

15 A. iXBlue, yes.

16 Q. iXBlue, excuse me. 17:51:23

17 Do you know when that specialty fiber web 17:51:27  
18 page first was published? 17:51:29

19 A. No. 17:51:29

20 Q. Do you know if it was published before or 17:51:31  
21 after you started designing [REDACTED] [REDACTED]  
[REDACTED]? 17:51:39

23 A. I don't know. 17:51:40

24 Q. Again on page 5 looking at Figure 4, do you 17:51:43  
25 know whether that website was posted before or after 17:51:46

1 the conversation with Mr. Levandowski? 17:51:47

2 A. I don't know. 17:51:48

3 Q. Is there anything else in the declaration in 17:51:54

4 which you're relying on representations from Uber's 17:51:59

5 lawyers? 17:51:59

6 MR. KIM: Objection; form. 17:52:01

7 THE WITNESS: Figure 6, I relied on Uber's lawyers 17:52:06

8 to excerpt this section from the spreadsheet. 17:52:09

9 Figure 7A and 7B, I relied on Uber lawyer to put 17:52:20

10 down these files that were sourced by somebody 17:52:23

11 else. 17:52:24

12 BY MR. JAFFE: 17:52:24

13 Q. Who were they sourced by? 17:52:26

14 A. I'm fairly certainly they would be sourced by 17:52:29

15 Gaetan. 17:52:29

16 Q. So Gaetan provided these pictures? 17:52:31

17 A. I believe so, yes. 17:52:32

18 Q. Did you talk to Gaetan about what you wanted 17:52:34

19 to provide, what you wanted him to put in here? 17:52:37

20 MR. KIM: Objection; form. 17:52:39

21 THE WITNESS: No. 17:52:39

22 BY MR. JAFFE: 17:52:39

23 Q. What was your understanding of what 17:52:41

24 Mr. Pennecot went out and looked for? 17:52:44

25 A. My understanding was these were documents 17:52:52

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1 that were already produced and were gathered for the 17:52:55  
2 purpose of this declaration. 17:52:57

3 Q. And it refers to [REDACTED] [REDACTED]  
4 [REDACTED] 17:53:03

5 A. Yes. 17:53:03

6 Q. Has the FAC lens in Fuji always been 17:53:12  
7 [REDACTED] 17:53:14

8 THE REPORTER: I'm sorry, can you repeat that? 17:53:14

9 BY MR. JAFFE:

10 Q. Has the FAC lens in Fuji always been  
11 [REDACTED]

12 A. I've only known it to be [REDACTED] 17:53:19

13 Q. So you've never seen a version of a FAC lens 17:53:23  
14 that is [REDACTED] 17:53:24

15 A. No, not to my knowledge. 17:53:26

16 Q. And would it surprise you if Uber -- go 17:53:29  
17 ahead. 17:53:29

18 A. You left the question very general and I 17:53:32  
19 answered too quickly. I've never seen [REDACTED] 17:53:35  
20 [REDACTED] 17:53:41

21 Q. What other design have you seen? 17:53:47

22 A. [REDACTED] [REDACTED]  
23 [REDACTED] 17:53:54

24 Q. In terms of the custom FAC lens that includes 17:53:57  
25 a cylindrical optical surface, have you ever seen one 17:54:01

1 of those? 17:54:02

2 MR. KIM: Objection; form. 17:54:03

3 THE WITNESS: Are you asking about anywhere? 17:54:05

4 BY MR. JAFFE: 17:54:05

5 Q. At Uber or Otto. 17:54:07

6 A. If -- I don't know of seeing a cylindrical 17:54:12

7 custom FAC lens at Otto. 17:54:14

8 Q. And you don't know whether Fuji ever had a 17:54:19

9 cylindrical FAC lens ever? 17:54:22

10 A. To my knowledge, [REDACTED] [REDACTED]

11 [REDACTED] [REDACTED]

12 [REDACTED] [REDACTED]

13 Q. What about [REDACTED] are you familiar 17:54:34

14 with that? 17:54:35

15 A. I've seen the name [REDACTED] 17:54:38

16 Q. What is that? 17:54:39

17 A. I believe it's the FAC lens. 17:54:41

18 Q. And do you know whether there are any 17:54:43

19 versions of that design that had a cylindrical optical 17:54:46

20 surface? 17:54:47

21 A. I'm not aware. If there were, I'm not aware 17:54:50

22 of them. So we have to go back to Gaetan's design 17:54:52

23 record to see if he started with a cylindrical design. 17:54:57

24 Q. So we talked about some of the charts where 17:55:00

25 you said that you relied on Uber's counsel. 17:55:04

1           What about any of the text? Are any of the           17:55:05  
2       numbers in here, do they come from Uber's counsel as       17:55:09  
3       opposed to you?   17:55:10

4           A.    A large part of the text, perhaps the bulk of    17:55:17  
5       the text in this declaration, came from Uber's           17:55:20  
6       counselors.   17:55:20

7           Q.    Okay. So they provided you basically all the   17:55:24  
8       text in this draft; is that fair?                       17:55:26

9           MR. KIM: Objection; form.                           17:55:28

10          THE WITNESS: It's a little too much to say "all,"   17:55:30  
11       but I could say more than half and that I was given an   17:55:33  
12       opportunity to edit.                                       17:55:37

13       BY MR. JAFFE:   17:55:37

14          Q.    Okay. So I want to go back to my original    17:55:43  
15       question which was, what part of the text are you       17:55:47  
16       relying on representations from Uber's lawyers for       17:55:50  
17       purposes of your declaration?                           17:55:52

18          A.    Since Uber's lawyers originated most of the    17:56:13  
19       text, I relied on Uber's lawyers to originate most of   17:56:18  
20       the text in here.   17:56:19

21          Q.    Meaning, most of the text you're relying on    17:56:26  
22       on their representations; is that fair?                   17:56:29

23          A.    I'm relaying on their --                       17:56:30

24          MR. KIM: Objection; form.                           17:56:31

25          THE REPORTER: I'm relaying on their . . .

1 THE WITNESS: I'm relying on their origination. 17:56:37  
2 BY MR. JAFFE: 17:56:37  
3 Q. So for example, looking at page 13, there's a 17:56:43  
4 chart comparing Spider and Fuji. Uber's lawyer came 17:56:49  
5 up with that chart; right? 17:56:51  
6 MR. KIM: Objection; form. 17:56:52  
7 THE WITNESS: Yes. 17:56:53  
8 BY MR. JAFFE: 17:56:53  
9 Q. The idea -- going back to page 8, the idea of 17:57:09  
10 excerpting what's in Figure 6, was that -- did that 17:57:14  
11 idea come from Uber's lawyers? 17:57:17  
12 MR. KIM: Objection; form. Also on grounds of 17:57:20  
13 work product. 17:57:25  
14 THE WITNESS: I presume it was. 17:57:30  
15 BY MR. JAFFE: 17:57:30  
16 Q. And going back to -- 17:57:42  
17 MR. KIM: How long have we been going on the 17:57:57  
18 record? 17:57:58  
19 THE VIDEOGRAPHER: The entire time? 17:57:59  
20 MR. KIM: Yes. Oh, just since the last break. 17:58:05  
21 THE VIDEOGRAPHER: 54 minutes. 17:58:07  
22 MR. JAFFE: I'm referring to your original 17:58:32  
23 declaration. Let's go to your original declaration, 17:58:32  
24 please.  
25 MR. KIM: I'm going to object to this whole line 17:58:34

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1 of questioning as outside the scope of recross. 17:58:39

2 BY MR. JAFFE: 17:58:39

3 Q. Did Uber's lawyers, did they prepare your 17:58:42

4 original declaration as well? 17:58:44

5 MR. KIM: Objection; form. 17:58:45

6 THE WITNESS: I would say Uber's lawyers 17:58:54

7 originated most of this declaration. 17:58:58

8 BY MR. JAFFE: 17:58:58

9 Q. What percentage of the words in your original 17:59:00

10 declaration came from Uber's lawyers? 17:59:03

11 MR. KIM: Objection; form. 17:59:07

12 THE WITNESS: I don't know what the percentage is. 17:59:08

13 BY MR. JAFFE: 17:59:08

14 Q. Over 80 percent? 17:59:10

15 MR. KIM: Objection; form, outside the scope. 17:59:14

16 THE WITNESS: Yeah, I'm not sure. 17:59:18

17 I know I had some textural editing input to this 17:59:25

18 document, but I don't remember like percentagewise 17:59:26

19 on the words. It was less than half. 17:59:31

20 BY MR. JAFFE: 17:59:31

21 Q. But in terms of the drafting, they sent you a 17:59:34

22 full draft of your declaration? 17:59:36

23 MR. KIM: Objection; form. 17:59:38

24 BY MR. JAFFE: 17:59:38

25 Q. Is that right? 17:59:39

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1 A. Yes, I got -- 17:59:44

2 MR. KIM: Outside the scope of redirect. Recross. 17:59:47

3 THE WITNESS: Yes. I got a more or less complete 17:59:51

4 draft from Uber's lawyers. 17:59:54

5 BY MR. JAFFE: 17:59:54

6 Q. And I want to take you particularly to page 17:59:56

7 12 of your original declaration. 18:00:00

8 A. Okay. 18:00:03

9 Q. Do you see where you refer to 18:00:06

10 Mr. Levandowski's input? 18:00:08

11 A. Yes. 18:00:16

12 Q. What did you do -- well, let me start this, 18:00:19

13 was this paragraph drafted by Uber's lawyers? 18:00:22

14 MR. KIM: Objection; form outside the scope. 18:00:26

15 THE WITNESS: I believe they wrote the first draft 18:00:32

16 of this. 18:00:33

17 BY MR. JAFFE: 18:00:33

18 Q. And what did you do to verify before signing 18:00:38

19 your declaration that what's here in paragraph 19 and 18:00:43

20 written by Uber's lawyers was true and accurate based 18:00:46

21 on your personal knowledge? 18:00:48

22 A. I used my personal knowledge, my personal 18:00:55

23 experience, my recollection, read this, agreed. To my 18:01:02

24 knowledge, to the best of my knowledge, that the 18:01:04

25 statement in paragraph 19 was true. 18:01:06

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1 Q. So Uber's lawyers sent you paragraph 19. You 18:01:09  
2 said looks good and you signed it? 18:01:11  
3 MR. KIM: Objection; form. 18:01:12  
4 THE WITNESS: They sent me 19. I may have made an 18:01:15  
5 edit in it. I don't recall. And then gave that edit 18:01:21  
6 back. Got a final draft, read through, and signed it. 18:01:25  
7 BY MR. JAFFE: 18:01:25  
8 Q. What was the edit you gave to paragraph 19 to 18:01:27  
9 make it accurate? 18:01:28  
10 MR. KIM: Objection; form. 18:01:35  
11 THE WITNESS: I may have suggested that we make a 18:01:39  
12 strong statement as possible regarding the 14,000 18:01:44  
13 files having not seen any evidence of that in the 18:01:48  
14 development of this sensor. 18:01:49  
15 BY MR. JAFFE: 18:01:49  
16 Q. Anything else? 18:01:51  
17 A. I don't recall. 18:01:55  
18 Q. So for purposes of the first sentence here 18:01:59  
19 about Mr. Levandowski never had nor currently has any 18:02:03  
20 design input, that was written wholesale by Uber's 18:02:08  
21 lawyers? 18:02:08  
22 MR. KIM: Objection; form. 18:02:10  
23 THE WITNESS: I don't recall if I may have -- if I 18:02:13  
24 had made any edits to this first sentence or not. 18:02:16  
25 BY MR. JAFFE: 18:02:16

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1 Q. And what did you do to verify -- well, 18:02:19  
2 actually I think you already said this. 18:02:21  
3 You didn't do anything to verify that this 18:02:24  
4 statement was accurate in paragraph 19 of your 18:02:27  
5 declaration after it was provided to you by Uber's 18:02:30  
6 lawyers; right? 18:02:31  
7 MR. KIM: Objection; form. 18:02:37  
8 THE WITNESS: I did no investigation to verify 18:02:40  
9 that the statements made in paragraph 19 were 18:02:46  
10 absolutely true. 18:02:49  
11 BY MR. JAFFE: 18:02:49  
12 Q. Did you talk to Mr. Levandowski? 18:02:52  
13 A. No. 18:02:52  
14 Q. Okay. All right. So what parts of your 18:03:03  
15 original declaration are you relying on information 18:03:08  
16 from Uber's lawyers? 18:03:11  
17 A. Can you be specific when you say relying on 18:03:21  
18 the Uber's lawyers. 18:03:25  
19 Q. The basis for it being in your declaration is 18:03:28  
20 something provided to you by counsel. 18:03:32  
21 MR. KIM: Objection; form. 18:03:35  
22 THE WITNESS: Again, this document was, in the 18:03:41  
23 majority, sourced by lawyers for Uber. 18:03:47  
24 BY MR. JAFFE: 18:03:47  
25 Q. So you would say the majority of the document 18:03:49

1     you're relying on information from counsel; is that     18:03:51  
2     right?     18:03:52  
3     A.     For the majority of the document, I'm relying     18:03:58  
4     on Uber's counsel to originate the document. I'm not     18:04:01  
5     necessarily relying on them. If you're implying --     18:04:04  
6     Q.     Let me --     18:04:04  
7     MR. KIM: Let him finish.     18:04:06  
8     BY MR. JAFFE:     18:04:06  
9     Q.     That's fine. Let me be more clear.     18:04:10  
10     MR. KIM: Wait. Are you cutting off the witness     18:04:11  
11     here?     18:04:12  
12     MR. JAFFE: I think I'm trying to clarify. I'll     18:04:16  
13     withdraw the prior question.     18:04:18  
14     BY MR. JAFFE:  
15     Q.     I want to understand what facts are in your     18:04:20  
16     declaration that you relied on from counsel.     18:04:24  
17     A.     I'm still having a hard time understanding     18:04:27  
18     when you say relying on counsel for facts, whether     18:04:31  
19     you're implying I'm relying on Uber's counsel for the     18:04:35  
20     veracity or whether I'm relying on Uber's counsel to     18:04:39  
21     put that information into the declaration.     18:04:41  
22     Q.     That's fair. Let me help clarify this.     18:04:43  
23     So what I'm trying to get at is, were you     18:04:48  
24     relying on Uber's counsel for the basis of these     18:04:51  
25     facts, that is, you don't have independent personal     18:04:52

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1 [REDACTED] 18:12:20

2 [REDACTED] 18:12:20

3 BY MR. JAFFE:

4 Q. Okay. Going back to your declaration here, 18:12:25

5 we're looking at paragraph 18. 18:12:26

6 MR. KIM: Jordan, how long do you plan on going? 18:12:30

7 It's about 6:10. Been going over an hour since the 18:12:34

8 last break. 18:12:35

9 MR. JAFFE: Just kind of keep going. 18:12:37

10 MR. KIM: Yeah, well -- I think we should take a 18:12:40

11 break. 18:12:40

12 MR. JAFFE: Why don't we do this quick question 18:12:44

13 and then we'll take a break. 18:12:45

14 BY MR. JAFFE:

15 Q. Are you looking at paragraph 18 of your 18:12:47

16 original declaration? 18:12:49

17 A. Yes. 18:12:51

18 Q. So you referred to this in the redirect 18:12:55

19 testimony. You talked about the custom beam spacing 18:12:58

20 and angle summary Scott provided. 18:13:01

21 Do you see that? 18:13:02

22 A. Yes. 18:13:02

23 Q. So at the bottom of the page -- and this is 18:13:07

24 what we talked about earlier today, you said my team 18:13:10

25 imported the data. 18:13:11

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1 Do you see that? 18:13:12

2 A. Yes. 18:13:12

3 Q. And based on what you talked about with 18:13:14

4 Mr. Kim, Uber's lawyer, it was Mr. Pennecot that 18:13:18

5 imported the data into Zemax; right? 18:13:21

6 A. Yes. 18:13:22

7 Q. And it was Mr. Pennecot that then determined 18:13:25

8 the resultant emitting points of the laser diodes; 18:13:29

9 right? 18:13:29

10 A. Yes. 18:13:29

11 Q. And it was Mr. Pennecot that then exported it 18:13:33

12 into CAD software; right? 18:13:36

13 A. Yes, that's my understanding. 18:13:38

14 Q. And so Mr. Pennecot was the one who actually 18:13:42

15 came up with [REDACTED] 18:13:47

16 based on Mr. Boehmke's beam angles; isn't that right? 18:13:51

17 A. No, I don't think so. 18:13:52

18 Q. So what Mr. Pennecot exported into CAD 18:13:56

19 software, that wasn't [REDACTED]? 18:14:04

20 A. So if we go back carefully to transcripts, 18:14:07

21 what I should point out is, since this declaration, I 18:14:11

22 have more detailed information of exactly how 18:14:14

23 Mr. Pennecot did his import. To be accurate, I want 18:14:19

24 to say that there's an error in here that he brought 18:14:25

25 the angles into CAD software, brought the lens design 18:14:31

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1 and field curvature shape from Zemax into CAD 18:14:37  
2 software. 18:14:37  
3 Now you're asking did Mr. Pennecot in fact 18:14:40  
4 design the [REDACTED]  
5 [REDACTED] Mr. Pennecot was dependent on 18:14:50  
6 somebody else to tell him how many boards the angles 18:14:53  
7 had to be divided among, and then Mr. Pennecot set the 18:14:58  
8 positions of the laser diodes onto those boards. 18:15:02  
9 Q. Who told Mr. Pennecot to use [REDACTED]? 18:15:05  
10 A. I told Mr. Pennecot to use [REDACTED] in 18:15:09  
11 the optical cavity. 18:15:10  
12 Q. Who told him to use [REDACTED] in total? 18:15:13  
13 A. I don't think anybody told him to use [REDACTED]  
14 [REDACTED] in total. 18:15:18  
15 Q. Who told him to put [REDACTED]  
16 [REDACTED]? 18:15:22  
17 A. Mr. Pennecot understood the reason we were 18:15:31  
18 going to [REDACTED] so I'll -- with that said, I'm 18:15:35  
19 not aware that anybody had to tell him to [REDACTED]  
20 [REDACTED] 18:15:41  
21 Q. You don't know where Mr. Pennecot [REDACTED]  
22 [REDACTED] from? 18:15:45  
23 A. No, I know exactly where he got it from. 18:15:48  
24 Q. Where did he get it from? 18:15:49  
25 A. The need to [REDACTED] 18:15:52

1 If you're asking do I know from whom, no. I would say 18:15:57  
2 that he could derive that himself. 18:15:59  
3 Q. Okay. So -- but just to be clear, 18:16:04  
4 Mr. Pennecot -- you told him [REDACTED]  
5 [REDACTED] in the SolidWorks 18:16:13  
6 CAD software, and you told him 64 channels and he 18:16:16  
7 created [REDACTED] is that fair? 18:16:21  
8 A. I didn't necessarily tell him 64 channels. 18:16:24  
9 He got the list of angles that Scott Boehmke had 18:16:28  
10 generated. 18:16:29  
11 Q. So he knew that there were 64 channels; 18:16:31  
12 right? 18:16:31  
13 A. Without me telling him. 18:16:33  
14 Q. So the sequence of events was there was Scott 18:16:36  
15 Boehmke provided beam angles for 64 channels? 18:16:40  
16 A. Yes. 18:16:40  
17 Q. That went to Mr. Pennecot. He imported that 18:16:45  
18 data into Zemax. And after he outputted into CAD 18:16:50  
19 software, the result was a design with [REDACTED]  
20 [REDACTED]; is that 18:17:01  
21 right? 18:17:02  
22 A. Can you read that back. 18:17:04  
23 (Record read by reporter as follows: 18:17:04  
24 "Question: He imported that data into Zemax. 18:17:04  
25 And after he outputted into CAD software, the

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1 as a whole taken with no prior knowledge that this 19:08:02  
2 document does not completely represent accurately what 19:08:06  
3 goes into Boards [REDACTED] together as a whole. 19:08:09  
4 BY MR. JAFFE: 19:08:09  
5 Q. Let me ask the question again. 19:08:11  
6 Sitting here today, you cannot -- sitting 19:08:14  
7 here today, Exhibit 1060 does not accurately represent 19:08:18  
8 what is in Fuji? Yes or no. 19:08:20  
9 MR. KIM: Objection; form. 19:08:26  
10 THE WITNESS: Yes, but only in the strictest 19:08:29  
11 meaning of accuracy. 19:08:33  
12 BY MR. JAFFE: 19:08:33  
13 Q. What does that mean? 19:08:35  
14 A. That means the magnitudes in here match but 19:08:41  
15 the sign change has not been consistently applied. If 19:08:45  
16 I had to use this data and no other data to build a 19:08:49  
17 Fuji, then I would have a problem in the strict sense. 19:08:53  
18 Q. I see. Okay. 19:08:54  
19 So Exhibit 1060 has some inaccuracies and 19:09:00  
20 problems, but it's generally accurate; is that right? 19:09:05  
21 A. I'm more comfortable saying that, yes. 19:09:07  
22 Q. So you couldn't build Fuji looking at Exhibit 19:09:10  
23 1060; right? Using this data? 19:09:12  
24 A. Right. 19:09:12  
25 Q. And it wouldn't be fair to try and build a 19:09:16

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1 Fuji using just this data; right? 19:09:18

2 MR. KIM: Objection; form. 19:09:20

3 THE WITNESS: It would not render a correct Fuji 19:09:24

4 based on this data only by itself. 19:09:27

5 BY MR. JAFFE: 19:09:27

6 Q. Now, I want to go back to paragraph 19 of 19:09:34

7 your declaration, your original declaration, the 19:09:40

8 sentence about Mr. Levandowski. 19:09:42

9 A. Okay. 19:09:53

10 Q. We talked about this before and you testified 19:09:56

11 that you did no investigation to confirm the sentence 19:10:01

12 in paragraph -- the first sentence in paragraph 19; 19:10:04

13 right? 19:10:04

14 A. Right. 19:10:04

15 Q. And I just want to make sure that it's clear. 19:10:09

16 When you said you did no investigation, did 19:10:11

17 you do anything to confirm this statement before you 19:10:14

18 signed your declaration? 19:10:16

19 MR. KIM: Objection; form. 19:10:21

20 THE WITNESS: I refer to my recollection of how 19:10:23

21 the Fuji was developed, remembered no evidence of 19:10:28

22 Anthony coming in and controlling or designing those 19:10:31

23 aspects of the Fuji. 19:10:33

24 BY MR. JAFFE: 19:10:33

25 Q. Did you talk to anyone to confirm this 19:10:35

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1 statement? 19:10:36

2 A. No. 19:10:38

3 Q. Did you look at any documents to confirm this 19:10:41

4 statement? 19:10:41

5 A. No. 19:10:44

6 Q. Did you talk to anyone else on the LiDAR 19:10:46

7 team? 19:10:47

8 A. No. 19:10:50

9 Q. Okay. Other than consulting your memory, did 19:10:58

10 you do anything to confirm the first sentence of 19:11:00

11 paragraph 19 of your original declaration? 19:11:02

12 A. No, not that I recall. 19:11:12

13 Q. Okay. Let's -- 19:11:13

14 MR. KIM: So we've gone 30 minutes on the record. 19:11:18

15 We're going to conclude this deposition 19:11:23

16 as we discussed at the break on the grounds that 19:11:27

17 we've given you more time than we took on 19:11:32

18 redirect, and he's now gone close to seven hours 19:11:35

19 on the record. 19:11:36

20 MR. JAFFE: I understand your position. 19:11:39

21 THE VIDEOGRAPHER: This is the end of today's 19:11:44

22 deposition of Mr. James Haslim. 19:11:46

23 We are off the record at 7:11 p.m. 19:11:50

24 The total number of media used was six and it 19:11:53

25 will be retained by Veritext. Thank you. 19:11:56